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# WCBM 2015

CONFERENCE PROCEEDING BOOK

“The Great-Copernican Change in Management Study:  
The Age of Humanism, Humanistic Business Administration”

ISSN: 2384-3586  
Editor: Jeong-Gil Choi, Ph.D

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“The Great-Copernican Change in Management Study:  
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Editor: Jeong-Gil Choi, Ph.D

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The World Conference on Business and Management is an international interdisciplinary joint conference, focusing on both theory and practice of new ideas and perspectives on interdisciplinary global business prosperity. Over 300 delegates from 25 countries participate in the conference for an opportunity to hear and discuss fresh ideas about a new business paradigm, to share the latest knowledge, and to learn a view of the business of the future.

The conference presents original contributions including research papers and posters on all topics related to global business and management. The conference also presents The Global Great Debate which is a unique platform that seeks to build a bridge of understanding and discussion between Eastern (includes Oriental) and Western thinkers. The platform is open to everyone who would like to discuss a new paradigm, people-oriented management for enhancing an intact life.

For the WCBM 2015, all abstracts and full papers were subject to a peer reviewing process. The result of these efforts produced 230 empirical, conceptual and methodological papers involving all functional areas of global business and management. Of the 185 papers accepted for presentation at the conference, 146 papers including 81 abstracts are published in this Conference Proceeding Book.

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## CONFERENCE MAIN THEME PAPER

# The Age of Humanism, Humanistic Business Administration

**Jeong-Gil Choi**

**Professor, Kyung Hee University, Who's Who in the World  
President, People and Global Business Association (P&GBA)  
Chief Editor, Global Business and Finance Review (GBFR)**

### **Abstract**

The age of Capitalism, which emphasizes instrumental rationality and efficiency, cannot exist any longer. The era we are living today should be the age of humanism that regards affection and human as main values, which must work massively. Then what is the new kind of business administration for the age of humanism? That is Humanistic Business Administration (HBA), which is founded on humanities, centralizing affection and human. The source of HBA is creativity based on humanities; the highest values of HBA are affection and human; the system and output of HBA is sustainability, which pursues the law of increasing returns. From now on, humanism is the management thought operating the world, and I announce that when there are supporting academic system and research all around the world, and when these highest values settle down in human societies regardless of their size, there will be peace and prosperity for mankind.

### **1. Nowadays, the Last Stage of Capitalism**

History circulates like four seasons, spring, summer, fall, and winter. What is the driving force that makes this circulation of four seasons possible? That is *Yin* and *Yang*. *Yang* makes something hot, when *Yin* makes something cold. The two driving forces that help the circulation of history, *Yin* and *Yang*, are body and soul. History circulates: it circulates sometimes taking care of soul, and sometimes taking care of body. Nowadays what do people put stress on? Everybody puts stress on body. Body is material and it is the symbol of materialism, what body needs is money, and it is the essence of capitalism. During the era of Capitalism, people tend to focus on body to judge, and when one meets one, one is estranged from one another. The time, which asks for soul and spirits, has come.

*Instrumental rationality* which pursued *quantitative efficiency* was a dominant mentality in the 20<sup>th</sup> century, but it is not powerful anymore. The elements of *creativity*, such as imagination, intuition, emotion, diversity, relationships, community, were discounted as unscientific, unreasonable, but they are magnified as essential values of economy for 21<sup>st</sup> century. If we use more connotative language, those essential elements would be "affection and humanity". I strongly assert that "If there is not affection, he or she would not be a human." The core of human society is affection. Let us imagine science, rationality, imagination, intuition, emotion, diversity, relationship, community without affection! At this age, we are all so desperate for affection and people-oriented society.

### **Are we satisfied in living?**

In the past, though people were poor, they shared each other one's food, and lived intimately. But nowadays, because of money, everyone is stranger to one another, even though they are their flesh and blood. People are selfish, and there is too much materialism going on. Money is everything, and there are people, who believe that a person needs only money to be happy, everywhere in this society.

There is only one cake, if other person has it, then I will starve, so competition is inevitable. Competition may have its pros: competition procreates development; cutthroat competition made this material civilization develops at a great rate of speed. However, what is the situation now in this last stage of competition, which is the last stage of Capitalism. Friends are not real friends, since they can be future contestants. When something good happens to one's friend, he or she says "Congratulations!", but his or her face is distorted by jealousy. Whereas something bad happens to one's friend, he or she says "Too bad! Sorry!", but he or she is joyful with feeling of relief. When we meet friends, there is no real conversation, we just kill time, and go home and play with our pet dogs. Pet dogs became more comfortable companions. Therefore today, dogs are much happier than people. We do not cry when our grandparents pass away, but we sob when our canine dies.

Today even when we go out, we do it competitively. When he or she is in relationship, even though one's sweetheart had one billion, he or she breaks up with that person, if somebody who has three billion comes along. If one is tormented by a guilty conscience, then he or she will be treated as a retard. They break up so fast. We are lonely even though we are in a relationship. I can change my boyfriend or girlfriend, so I am "uncomfortable" since he or she can break up with me anytime. Even when we get married, we are not "relieved." Even though we are couple, we handle our assets as a joint checking account. Today couples are living in the same house forever, but they are in the stage of "loneliness and discomforts."

Human society all around the world is suffering from conflict between generation, the rich and the poor, parents and children, brothers, and neighbors. We have forgotten our nature, which is the essence of human himself or herself; the world has become confused with struggle without affection since we have participated in deadly, capitalistic competition, which emphasize only *instrumental rationality* which pursue *quantitative efficiency*.

## **2. Introspects on Capitalism**

### **The birth and the evolution of capitalism**

In 1848, during the early period of capitalism, large-scale factories, which are ancestors of contemporary enterprises, were founded, and serious confusions, like exploitation of laborers, existed since there was no elementary level of know-hows of business administration. Karl Marx saw it, and he firmly believed that communism will take place of capitalism soon. Even though capitalism experienced crisis several times, it did not collapse but evolve into various forms, unlike Marx's confident prediction. Rather, better life for labor class, which socialism insisted, were effectively achieved in capitalist system, which flexibly borrowed ideas of the left, *i.e.* social security and welfare state. On the other hand, socialism countries dissolved in the 1990s, because they were grabbed by the new kind of class, the communist party and its authoritarian power, which Marx, who clamored the abolition of class distinction, had never anticipated.

The most ground-breaking turning point in the historical evolution of capitalism is the revolution of massive production led by Henry Ford and Frederick Taylor in the early 20th century. During the late 18th century, with the Industrial Revolution, full-fledged conversion into capitalistic market economy had accelerated, but its development of productive capacity had been at a standstill as ever. Especially by the 19th century, geographical discoveries, imperialistic reclamation work,



improvement of public health, development of transportation and communication, proliferation of market economy had created population and market explosion, which had led to massive market demand, but because of inefficiency of production method, the situation, which supply does not meet demand outrageously, continued. The main reason for this is that even though machine and instruments developed, production method did not overcome the method of craftsmanship, in which experts produce goods according to their own ability and will.

Henry Ford, who established a small automatic manufacturer in 1903, realized that efficient and massive production is possible, if it does not depend on the ability of certain people like artisans or professionals; he researched thoroughly, and finally, invented the mass production method of Fordism, which subdivides total work process into several simple repeating works through the conveyor belt. The result was tremendous. The era of mass production, which does not depend on artisans or professionals, has come. People were extricated from the limitation of quantitative productivity for the first time in history with the mass production method of Fordism; the essence of it was *quantitative efficiency*, which makes standardized goods in bulk but at a low price rate.

### **The era of efficiency dogmatism: the spread of instrumental rationality**

In the early 20th century, the mass production method of Fordism solved the problem of productivity, which was the biggest impediment on transition into the modern industrialized society, in a drive, and the core logic of Fordism is the maximization of *quantitative efficiency*. *Quantitative efficiency* has become a dominant mentality, which guided the development of contemporary society as it was expanded into all areas of society, not alone industry and economy, but politics, culture, and education.

In other words, 20th century was the era of *quantitative efficiency*, which pivoted around the massive production-massive consumption. The philosophical spirit, which was the foundation of *quantitative efficiency* Dogmatism of that time, was *Instrumental Rationalism* that was spread globally at the turn of the 20th century before and after. The tide of *Rationalism*, which appeared with scientific revolution, the spread of market economy, the disruption of traditional feudalism and the advent of the civil society, has become the philosophical base of transition into the modern society. *Instrumental rationality*, which means effectively accomplishing his or her purpose through objective and careful calculations, finds the most rational way to act by choosing the best means to do it; it was the most powerful philosophical spirit of the 20th century that was the common operation base of all areas of society.

Thus, being rational and being effective was regarded in the same light with being scientific; everything that does not have direct relationship with effective achievement of purpose was identified as unscientific and pre-modern. And human activity was interpreted as the means to an end and it does not have any meaning or importance other than that. If organization or behavior was not thoroughly calculated or planned like a machine, then it was denounced as irrational and unscientific. Contemporary and machinelike bureaucracy organization, which is the best mean pursuing the maximization of *quantitative efficiency*, was dispersed in to industries or governments, in addition to all areas of society like education and culture.

### **Things people have lost**

People paid the price during the transition process into rational and modern society. Through the hectic process of modernization and rationalization, human community lost many things that are as important as efficiency and rationality. That is because in contemporary society, decision making and behavior, which are depending on personal factors such as feeling, emotion, friendship, sympathy, imagination, intuition, pleasure, desire, human relations and community minds, were regarded as irrational and unscientific things.

As a result, contemporary industrial society has become cold and inhumane society, although

it may be efficient and rational. Max Weber described this double-sidedness of contemporary industrial society as "The Iron Cage", which is an excellent idea. Iron is strong, shiny, modern, but it is also cold. Furthermore, if it is made of iron, then people inside of it cannot move an inch and will be suffocated. In other words, rational contemporary society, which had solved the limitation of productivity with the unprecedented *quantitative efficiency* during the past thousand years, was an inhumane one that considered even human as the one of the machine parts.

Above all, the overwhelming logic of efficiency in the 20th century industrial society deprived human community of creative power, which makes people to have new thoughts and behaviors originally and individually in order to overcome personal problems like human mechanization and alienation. In other words, act of creation, which attempts non-existing or unbound behaviors, was not necessary in contemporary society of Efficiency Dogmatism; moreover it was suppressed because it was misunderstood as the cause of impeding efficiency. Autonomy, diversity, emotion, and critical thinking, which make people try creative things, were considered as the causes of impeding efficiency, and they were excluded from the making of contemporary society completely. Consequently, majority members of society have become passive, and they were doing simple repeating work every day following the fixed rule, without opportunity to think independently and initiatively. Humanistic business administration founded on affection, which is the essential value of human, has disappeared in all areas of contemporary society even though people can hold on to humanity and culture, and can do liberal art thinking.

### **3. The New Era of 21st century, The New Kind of Business Administration**

In the year of 2000 before and after: transition from the industrial society, in which logic of efficiency was dominant, of the 20th century to the 21st century, the mentality of the time that take the lead of historical development all around the world is extensively changing again. Even though the problem of distribution still exists in the late 20th century, productivity of necessities, which are simply needed for people to survive, has much exceeded the total demand of required amounts in Quantitative standards. In other words, even though imbalance of distribution such as starvation of people in underdevelopment countries is a problem waiting to be solved, if we simply see *quantitative efficiency*, the environment of oversupply has come. In accordance with this change, product purchasing pattern of consumers have altered. Consumers buy new product not because original product have broken, but because they want entirely new products or different ones for themselves; we can see it from consumers' changing period of cellular phones. Also as Neoliberal Globalization speedily spread, boundary of nation-wide, market-wide, local-wide, and industry-wide disappeared and formed the only one global market; new kinds of demand are suddenly rising and former life cycle of product has rapidly shortened. Innovation in technology has become regular, and there are always new product and service, which were beyond imagination just a few years ago, coming out from all around the world. In addition, through Internet and SNS, information and knowledge are globally circulated in real time, regardless of distance, former pattern of spread of new product or service in serial order between local or markets collapsed and every innovation spread into entire global market at the same time. "The type of 20th century Industrial Society", which economic principles maximized original product or business, and efficiency of strength, has fundamentally changed into "Regular creative innovation", which is continuously making new, unprecedented value, product, and strength.

As a result, Industries, which led maximization of *quantitative efficiency* that massively produce standardized product, service, and value, such as GM, Ford, Panasonic, Nokia brought to ruin, while newly born organization such as Apple, Google, Amazon, which pursue new kind of logic suddenly took possession of supremacy of world economy. The essential logic of the new winners of 21st century economy is liberal, philosophical creativity, which continuously suggests unprecedented products, service, and values, not the maximization of *quantitative efficiency*.

*Instrumental rationality* which pursued *quantitative efficiency* was a dominant mentality in the 20<sup>th</sup> century, but it is not powerful anymore. *Creativity* is the key logic of the upcoming winners of the 21<sup>st</sup> century, and it will continuously come up with original products, service, values, *i.e.* “something new under the sun.” The elements of creativity, such as imagination, intuition, emotion, diversity, relationships, community, were discounted as unscientific, unreasonable, but they are magnified as essential values of economy for 21<sup>st</sup> century. If we use more connotative language, those essential elements would be “affection and humanity”. I strongly assert that “If there is not affection, he or she would not be a human.” The core of human society is affection. Let's imagine science, rationality, imagination, intuition, emotion, diversity, relationship, community without affection! Science, rationality, imagination, intuition, emotion, diversity, relationship, community with affection would solve problem of *quantitative efficiency* and *instrumental rationalism*, which is the essential value of Capitalism, fundamentally.

### **Affection and human centered HBA based on liberal arts**

‘The Transition of Mentality’ to Humanistic Business Administration (HBA) based on liberal arts will influence not alone organizations, such as government or enterprise, but also individual lives greatly. During the 20<sup>th</sup> century, individuals among the mass lost their own individualities, were unified like machine parts, were *anonymized* through social structure of meticulously designed contemporary industrial society. But to these colorless people, HBA, which is based on liberal arts and centered on affection and human, will give rights and abilities to go back to their own individual, creative lives.

Now, individuals do not necessarily have to live standardized and uniformed lives like others. Also they do not necessarily have to finish their own lives by doing every work repeatedly according to its defined procedure and schedule. They even do not have to choose their career among precedent jobs. The power of structure, like class, educational background, network, which restricted one's possibility once, has been weakened. The power of HBA makes individuals independently pursue unlimited possibilities so that they can overcome those restrictions in a breath. In other words, the philosophy of HBA is going to work as a new driving force that liberates people from “The Iron Cage” of Rationalism and Efficiency Dogmatism of contemporary industrial society, which Max Weber had predicted it would suffocate humans forever one century ago.

Humanities, philosophers, poet, novelist make their way to freedom. One characteristic of liberal arts, which makes it different from practical learning such as law and economics, is that it is a “study of proper noun”. Everything is different, and one is also different from one another. The philosophy of Nietzsche is different from that of Chuang-tzu. Art is the same. Liberal art is ultimately he's or she's him or herself after all. Through each stage of economic activity, when one practice the thought of HBA, which is based on liberal arts and centered on affection and human, we can transit our economic and business condition from diminishing marginal utility, which is caught by Instrumental Rationality and Efficiency Dogmatism, to increasing marginal utility of HBA.

Furthermore, if we want to reform the harmful effects of Capitalism, we should suggest new system and method by researching management thoughts of the East and the West in general. The Era of today, which is corrupted by Capitalism, individualism, and materialism, needs to refer to the Eastern thoughts of *declining*, which means concession. Also, we need to research philosophy of Mencius and perceive people like Mencius, who did not cognize people as pursuits of desire, but saw that people have good nature in birth, and “if they develop this nature, then they can do beneficial business.” Mencius told us that the real profit is from the heart of affection and trust; “the real profit” is what businessmen must realize for today. Confucius taught a lesson from *the Analects* that we should worry how to make wealth distribute evenly, and should not worry about the fact that wealth is little. We can live more like human beings, if we are prepared for food that we can share with our community.

Wilhelm Roepke said that "Market economy is an economic order that is the most virtuous, the most lively, and has the most powerful digestive power." "Self-regulation, justice, probity, fairness, chivalry, moderation, community spirit, respect on the dignity of others, customary norms are conditions that people should keep when they go out to the market and compete." The source of strength, composing these conditions people should keep, is affection and human centered thought of HBA, not the materialistic Capitalism.

Chuang-tzu said that we should not live under the drudge and poor conditions, like the quails, but we should leap into the sky, fly far and far away. Now is the time to heal from the wounds of the era of materialism and to fly into the new era of curing. Business administration until now produced competition according to the logic of land, the law of diminishing marginal utility, and the tilted society, which divides me and you. For the era of enlightenment, we need to begin new business administration, which considers the soul of sky. When land freezes, there will come warm spring, when the soul freezes, there will come a time, which emphasizes on the soul. The era of humanism, which is based on liberal arts and based on liberal arts and centered on affection and human, will prevail the era of materialistic Capitalism, which had underlined efficiency and *Instrumental Rationalism*. The new era and the new HBA should be researched widely and should be expanded. That time is right now.



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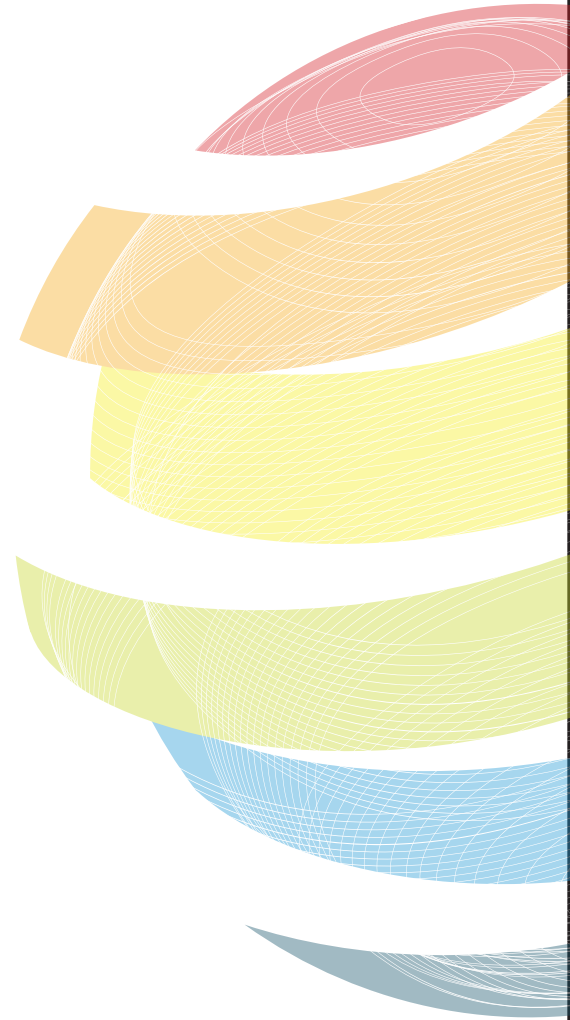
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# Papers





## Labor Force Participation of Malaysian Youth in Plantation Sector

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### Abstract

The Malaysian agricultural industry is labor-intensive, especially in the oil palm plantations. It is reported in 2013, the total number of plantation workers comprise of 69% foreigners and 31% local. The small number of local participation indicates their lack of interest to work in the industry and this urged the industry to resort to employing foreigners. The issues of rising social and security problems related to foreign workers; as well as the increasing the cost of foreign workers following higher recruitment costs, thus affecting the cost of palm oil production. The best solution is to locate the local labor youth in oil palm plantation sector. This study aims to investigate factors of labor shortage in agricultural oil palm plantations among rural youth in Perak, Perlis, and Kedah. By identifying factors that can attract more rural youth work in oil palm plantation, Malaysia can reduce dependency upon foreign workers. A survey method through questionnaire was used to collect data using random and purposive sampling method. A total of 332 respondents in FELCRA and FELDA were analyzed using Probit model. Finding shows that age and race are positively significant with the probability to participate in oil palm plantation. Whereas gender, marital status, level of education, parents' jobs are negatively significant. Imposing policies that improve the plantation environments, job's status, facilities and benefits will help to attract local youth to participate in plantation sector, specifically the oil palm.

**Keywords:** oil palm plantation, rural youth, labor force participation, foreign workers



## **The Factors of Choosing Non-Celebrity Endorsers on Instagram-Based Online Shops**

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### **Abstract**

Marketing communication which supported by communication technology, developed rapidly nowadays, it shows by the increasing of smartphones, and also followed by the increasing of smartphones' applications. One of the most downloaded applications in smartphones is social media platform called Instagram. The development and existence of Instagram were used by marketers to increase their sales, moreover for a new startups online shops, they freely to sell online and utilize freemium Instagram's features. Many of online shops who join on Instagram, are using non-celebrity endorsers to crack their sales instead of using the real celebrity, because naturally, the cost of celebrity endorsement is quite unaffordable. Different from previous researchs, that were almost related to celebrity endorsers on traditional media, this paper was made to seek the factors of choosing non-celebrity endorsers on social media Instagram. An exploratory study was conducted, while qualitative data were gathered through in depth interview to 75 online shops, who use Instagram as their marketing tools. The number of followers, the cost of non-celebrity endorsers, and attractiveness were identified as a main factors of choosing non celebrity endorsers, meanwhile there are some supporting factors included for further research.

**Keywords:** marketing communication, non-celebrity endorser, Instagram online shops

## Buy or Rent? A Real Option Valuation Model Point of View

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### Abstract

An important decision on a family's life is the moment at which it would be optimal to take the investment decision of acquiring an apartment. Not just families have to think about when to take the decision but also companies need to understand the moment at which it can have a higher demand for housing projects and real estate services. Real Estate markets are not static and investments are sunk costs and take time to reach its potential return, if that happens. So, decision making has to take into its framework possible shifts on its main variable(s), such as housing prices, rent pricing, financial costs, among other important decision-making market variables. The financial analysis of an investment under uncertainty conditions can be developed using models based on the Real Options Valuation (ROV) Theory. Real Option values the flexibility caused by potential oscillation of the variable(s) which influences the investment's value. Uncertainties are treated as stochastic variables. In this work we apply a ROV model at the uncertain decision of a real estate optimal buying timing considering that the owner can rent as an alternative. The stochastic variable in this model is the market value of the real estate property and we find an optimal price at which the investment should be triggered, that the expectation of real estate valuation is better than the renting option. The application is to a case in a Brazilian city medium class type apartment. Results demonstrate that using a real option model to this type of decision-making is positive. Since there is a volatile market it is better to consider a valuation technique that interns the expectation of better market conditions.

**Keywords:** Valuation, Real Options, Uncertainty, Real Estate, Personal Decision-Making

### I. Introduction

The housing industry is one of the main businesses worldwide. The industry's fundamental stakeholders are international and local constructing companies, real estate brokers and the families, responsible for the consumption and (or) investing part of the housing deals. It is possible to consider that a family or an investor's decision-making for acquiring a house or an apartment for living or for capital gains is a fundamental part of the Real Estate business. In this paper we focus on the decision of a family regarding the purchase of a residential

apartment for a living period and potential future selling comparing to an apartment renting decision. We can consider as a mixed real estate objective of living purposes and investing. The acquisition of real estate properties are one of the keys moments in a family's personal life, as well as an important income and employment generating industry which can help to boost or weaken a region's economy as hole. So, why not use economic evaluation tool to better understand the decision making in such an important economic sector?

Buying a house sometimes sounds like almost an obligation for a family. In Brazil, where we did or case study and simulations, we can consider that it's a tradition to engage in the "own House Dream", term traditionally used in the country to refer to that "necessity" of when a family is established (or even before) it needs to conquer its independence from renting at any cost. That sentence is the basis for lots of advertisement campaigns for constructing and Real Estate sector organizations and also government housing policy programs giving incentive for people to make the investment. But in a financial perspective is it always a dream? The objective here is not to discuss personal feelings such as subjective feelings of happiness of owning your own place or alike feelings, which surely have its values to some people and they don't care about paying the prices which they think the dream is worth. What we will discuss in here is the argument that in many cases is also existent in this discussion about housing or renting, which is the "always better to buy an apartment" story, considering the financial perspective.

Such an important decision involves high amounts of the decision-makers periodically incomes and should not leave aside a minimum financial valuation analysis of the deal. Traditional economic valuation analysis methodology such as Net Present Value (NPV) or Internal Rate of Return (IRR) can be useful but these financial viability indicators do not capture the flexibilities caused by uncertainties present in the Real Estate Market. As an example we can mention the possible housing prices oscillations in the market that certainly influences the decision-making process. NPV and IRR have an approach to uncertainties where it captures these by raising or decreasing a project's discount rate, when there is more or less risk and uncertainty. These concepts reduce an investment's value when the market uncertainty is elevated by considering in the decision-making a "Now or Never" approach excluding from the analysis the possibility of postponing the decision to better market conditions.

The Real option Valuation theory is based on the concepts of the options traded in stock markets applied to real projects, where those are considered options of investment. The methodology enables the valuation of a decision-maker flexibility to adapt and review his estimates for investment decisions if market the Real Estate market prices or any other uncertain variable which influences the family's investment valuation have any potential change. Real Option Valuation considers flexibility caused by uncertainties as a key point of an economic analysis of an investment. Real Option Models treat risk as an opportunity of better future condition for an investment and, consequently, a favorable valuation the higher the risk or uncertainty. Real Options Valuation Theory is the application of financial options valuation theory to the economic viability valuation of "Real" projects. Traditionally, Real Options has been used to make the economic analysis of projects in a wide range of different industries. It is not very common to use this valuation tool in valuing and capturing the flexibility of personal, family or individual investments such as the decision to buy, rent, when to make the acquisition or the renting of an apartment. Why not use Real Option Valuation theory to personal financial

decision-making when it involves the deciding of issues which incorporate some significant level of uncertainty that influences the valuation?

Works in the Real Options and Real Estate areas have been made covering a few different areas. Fortunato et al (2008), uses a model to determine the option values for a buyer to abandon a housing unit investment considering different refund levels. Yoshimura (2011) analysed the impact of a Real Option model on the potential value aggregation related to better evaluation of real estate construction projects. Bulan et al (2009), studied the effects of uncertainty on the delay of investments real estate projects and how competition influences this relationship. Cunningham (2006), tests the prediction of a Real Option model related to the delay of an investment in Real Estate projects due to higher market uncertainty. Rocha et al (2007), values these managerial flexibilities identifying the optimal strategy of investment in a Real Estate project is simultaneous or sequential regarding the different construction phases.

Real Options and personal decision – making choices is a field with a growing number of publications. Silveira et al (2014) uses Real Options to analyse the career choice between private and public sector jobs in Brazil considering salaries in both careers and the higher income uncertainties for a private sector job. Balbinotto and Oliveira (2011) applied real options to model the valuation of personal choice of people getting into a criminal “career”. Stokes (2012) studied the valuation effects of uncertainty using real options on personal choices of going to college or not and continue investing after graduation on keeping invest on post – graduation education. Dixit and Pindyck (1994) cite that the personal choice of a wedding as a Real Option valuation problem with a high initial investment cost and uncertain future outcomes.

## II. Method

The financial valuation is developed using a traditional real options model where the flexibility is on the possibility delaying the investment due to better future market conditions. The model’s objective is the estimation of an optimal investing decision-making moment at which the real estate investment reaches its market value, where taking on the investment decision can maximize the returns. The investment decision is attached to a total or partial irreversibility of the capital involved in the investment decision. The model will show a value at which incomes are at their ideal when compared to the financial sizes of capital mobilized to be put in the real estate deal. We also have a set of real option values for each of the possible market values assumed by the real estate properties that we will use to compare the different types of projects at each different property market price considering the main real option parameters: trend and volatility.

Essential in a model focusing the opportunity to delay the investment are the estimation of the two factors. The trend ( $\alpha$ ) reflects the long term tendency or how the uncertain variable will evolve over time. In this case we use the traditional Real Options valuation model developed by McDonald and Siegel (1986), a one uncertain variable model that in this case is the market value of a real estate property. The second parameter is the market volatility ( $\sigma$ ) which replicates the oscillation of the property’s market price showing the upside potential of the deal due to expectation of future peaks in prices. The apartment value, our uncertain variable, is treated stochastically and is governed by a Geometric Brownian Motion (GBM) stochastic process with the market value presenting consistent variations over time with a long term positive growth drift.

We suppose two different personal investment projects and compare one to the other at diverse market values to estimate what is the best decision at each apartment price. Constructing both projects cash flow we consider a 10 year time horizon for all costs, discount rate and incomes. This time horizon is the estimation, supposing that the family takes into account in the valuation, at least the time until the end of the bank loan to pay part of the apartment. That period was considered as ten years.

The first project is the acquisition by a family of a real estate property. The investment simulation for the case study and model application in here, contemplates an apartment in a residential building in a high middle class neighborhood in the city of Fortaleza, Northeastern coast of Brazil. An Initial investment (I) is made at the apartment buying moment with the expectation of future return from capital gains due to price appreciation after a period of residence in that apartment. When market prices are optimum we have a trigger investment decision point at which selling should be considered.

To obtain the net capital income (V) we discount potential operational costs such as, a yearly present value maintenance of 0,5% on the apartment estimated base value. This base value was acquired using data from the Brazilian real estate prices index, Fipe – Zap (2015). The simulated deal is of a three bedroom apartment with a size of 100 m<sup>2</sup> observed to have a total investment price in October 2009 (our selected base date) of US\$ 122,000.00. That investment is composed by an immediate pay of one third of the market value summed up with the present value of all monthly mortgage payments. Another cost in the transaction is the buying bureaucracy costs and owners transfer costs that are applied to the deal and have an estimation of around 10% of the investment. The last cost considered are the real estate agent costs which we fixed at a 4% of the total investment value. The total costs are operations, excluding the investment, are of US\$ 21,212.00. Another type of payments is the land tax which has a yearly pay (during the total time horizon). Equation (1) shows the valuation of the net investment income from the project “apartment acquisition”. Net Income is the model stochastic variable and it will oscillate accordingly to market values fluctuation of the apartment price, driven by trend and real estate market volatility for apartments in this area of the city.

$$V_1 = \text{Apartment Selling Price} - \text{Buying Costs} - \text{Transfer Costs} - \text{Land Tax} \quad (1)$$

The second personal project is the decision to choose not to buy an apartment and as an alternative the family will rent an apartment with the same size, characteristics and in an equal neighborhood as personal investment of the apartment acquisition, also during the ten years time horizon. In this case the investment is defined as the total present value amount of rent debts during the time horizon of ten years as in the first personal investment, which was US\$ 54,669.00. This expenditure was also estimated from the Brazilian real estate index Fipe – Zap (2015). The data for the deterministically variable “Investment (I)” is the average of monthly rents observed from 2009 to 2014 in this high middle class area of Fortaleza, Brazil. The Monthly average was a US\$ 4.52 per square meter of area, with a monthly outflow of US\$ 452.00.

The rent decision also has a net income as a stochastically governed variable. That personal family revenue is can be described as a planned savings account. The idea is that families will save at least some part of the monthly monetary difference between the payments of the house mortgage that they would have every month in case of buying the apartment, and the value of the monthly apartment rent. We considered the present value of all savings and the monthly payment was defined using traditional financing plan “Constant Amortization

System” used in the Brazilian finance markets, where the amortization is fixed and the monthly repayment, adding the interests, has a declining value until the total end of all the family’s debt.

Since in Brazil there are elevated interest rates for financing housing acquisitions for these middle class type apartments, in most cases there can be considerable positive monthly income results from choosing to rent the apartment. So the net income is directly linked to the apartment market value because there is an elevation of it when the future market price of the apartment rises and, consequently, so does the monthly payment value. Here we make an analysis considering a diversity of scenarios related to the capacity of different families to save money. After that there is a comparison between personal buying project and renting project for the diverse of families’ savings profiles.

Not only in this case but in this century’s Brazilian real estate market boom we have observed that the pace of the growth in rent prices aren’t as steep as the elevation in apartment buying markets. For that reason we simplified the model and considered the rent as a fixed payment not subject to the variability in market prices. Subtracted from the rent value is the land tax which is a normal procedure to be included in the rental value in housing rent contracts in the Brazilian market. As in the “apartment acquisition” case, this tax is a 1% rate over the base apartment market value defined before. Fundamental repairs costs in most contracts in the Brazilian market for rents are a landlord responsibility. So in the rent personal project this cost has a zero value. Equation 2 demonstrates the estimation of the net income values for the apartment rent situation during the time horizon, excluding the investment value (I) defined as the rental.

$$V_2 = \text{Savings} - \text{Land Taxes} \quad (2)$$

As defined before, the long-term trend and the volatility are the main parameters in a Real Options valuation model. In this paper we worked with an annualized trend rate. The estimation of this parameter is shown in equation 3, where n is the number of observation accordingly to quantity of data, P(t) the market price evolution index for the property at time t and P(t-1) the index at a period before. This equation enables the estimate of the trend evolution in the period of analysis. The data used to estimate  $\alpha$  the Brazilian Real Estate prices evolution Fipe – Zap index, which has for the Fortaleza market since 2009 until 2014. The estimated long term drift for the apartment acquisition decision is of a yearly 10,1 % growth, and for the renting cases are of 6,3%.

$$\alpha = \left( \frac{1}{n} \right) \sum \ln \left( \frac{i(t)}{i(t-1)} \right) \quad (3)$$

The volatility parameter is the model’s input data that denotes the market oscillation. The Fipe – Zap index of equation 3 is also used for the volatility estimate. The first step is the estimation of an yearly average for the index. The second step is to calculate the estimate of the standard deviation for the same group of yearly index data. Since the standard deviation gives a number from which the group of data is varying away from its average central value, when we divide the yearly variation measure by its yearly average, the result is an annual rate from which the market price of the property is fluctuating. To get one rate value for the time horizon for this economic analysis, the yearly volatilities are used to get the whole period average value. The estimated volatility

for buying the real estate property is a yearly 4,1%, while the renting situation has a 7,6% yearly fluctuation.

Real option value in continuous time is estimated through a differential equation. The model breaks the decision-making in the uncertain investment into two components. They are the immediate decision of investing and a valuation function that captures the subsequent decisions of investing in some time in the future ( Dixit, 1994). The optimal sequence of decisions is done backwards from the last moment that investment could be made to the beginning. At each future decision point its supposed that the family will compare payoff for immediate investment continuation and make the decision of investing or delaying based on the highest value. Equation (4) demonstrates the Bellman equation, which shows the maximization of the investment return in every future period.

The left side of (4) is the return that a decision - maker requires for holding the property or delaying the selling moment using a discount rate. On the right side there is the immediate flow of profits from the investment represented in the first term, and the second term is the expected capital gain from oscillation in apartment's value in the future. The summation of both terms is the total expected returns for delaying the investment. Using rules of stochastic calculus detailed in Neftci (2000), Dixit and Pindyck (1994) where they demonstrate the differential equation which estimates option value presented in (5) derived from (4), where  $[d^2 F(V)/d(V)^2]$  is the second derivative,  $[dF(V)/d(V)]$  the first derivative,  $F$  is the option value,  $\sigma$  is the volatility apartment price and  $\alpha$  is the apartment's expected future long time based price growth trend. Solving (5) requires boundary conditions which are shown in Dixit (1994). This is a valuation model which aims at the maximization of returns  $V$ , total net potential gains from having a property under a total investment cost  $I$ , the apartment value paid at the buying moment. The equation is going to define an optimal value  $V$  and, consequently, an apartment optimized market price.

Equation (6) represents the estimation of the option value or the expanded NPV. The valuation of the investment opportunity, with the inclusion of the flexibility of waiting for the best moment to take the decision to sell the property accordingly to the expected oscillation and evolution of its price.  $F(V)$  is the Real Option Value of the potential future expected net incomes,  $B1$  is a constant which is its estimation is defined using the fundamental parameters trend and volatility.  $V^*$  in equation 7 is the optimal value of net incomes that would generate investment in the personal projects detailed before.  $V^*$  triggers the optimal market apartment price that yields the optimal real option return over the fixed and irreversible investment  $I$ .

$$rF(V, t) = \max \{ \pi(V, t) + (1/dt)E[dF(V, t)] \}, \quad (4)$$

$$\left( \frac{1}{2} \right) \sigma^2 (V)^2 \left[ \frac{\partial^2 F(V)}{\partial (V)^2} \right] + \alpha \left[ \frac{\partial F(V)}{\partial (V)} \right] - rF = 0, \quad (5)$$

$$F(V) = (V)^{B1}, \quad (6)$$

$$V^* = \left[ \frac{B1}{(B1 - 1)} \right] I, \quad (7)$$

### III. Conclusions

#### Results

The Real Options theory on which the model applied here is based on generates an optimized result for the investment decision, including in the personal projects viability valuation analysis the flexibility to adapt the decision-making to an optimum moment due to superior real estate market conditions to each of the projects (apartment acquisition and housing renting) given by the expectation of apartment prices evolution in the future, based on the market's trend and volatility parameters. The Real Option model do not contemplate a "now or never" state for investing as it happens in traditional project economic viability analysis methodology. In the model here applied in the personal projects situations, McDonald and Siegel (1986) we have a contrasting condition where the family taking the investment decision has the opportunity to delay the investment until the model's optimal market values.

Table 1 summarizes the results comparing the economic viability analysis of the personal projects "apartment acquisition" and "apartment renting". In both analyses we use Net Present Value traditional method (V-I) and the Real Options model for comparison and discussion of results. In the upper part of the table it is observable that when there are lower values for apartment market prices, below US\$ 150,000, the traditional method (NPV) has negative values indicating a "no acquiring" the apartment investing decision. Real Option valuation at these prices have positive potential returns, since the model values the expectation that in the future the market conditions might change positively. That expectancy is reflected by the yearly growth trend (alfa) and volatility (sigma). Considering this future change potential the investing option has its value. If market goes the other way the families don't have any obligation of investing and they won't. So at these market prices we have a "wait" for the optimal moment decision. Only when the market price is around US\$ 30,000 the option value is zero. That happens because there isn't any net income (V) which is negative (US\$ -1,901.18) due to market selling price wouldn't compensate the costs and taxes. The optimal real option minimum optimal value would be reached at a market price of US\$ 279,000. We can say that at this price level there is the real option trigger point indicating a investing decision for prices over that. The real option that would be generated is over US\$ 124,000, also considering the expectations shown in the parameters. An indicator of the trigger point is the equalization of NPV and real options financial returns. The NPV method would indicate a investment trigger point much lower, since the investment should be taken when npv is above zero, and that occurs with market prices between US\$ 150,000 and US\$ 180,000, when net income is higher than the investment in buying the real estate property.

The lower part of table 1 is the viability analysis of personal project "rent an apartment". To start talking about the results we selected as example a base case in which the family saves 100% of the difference between a supposed mortgage monthly payment and the supposed rent value. The idea here for the optimization is that this

Table 1 – Model's Fundamental Results



Apartment Price (US\$)	Operational Costs (US\$)	Land Tax (US\$)	V (Net Income) (US\$)	I (Investment) (US\$)	$\alpha$	$\sigma$	V-I (US\$)	Real Option (US\$)
30,000.00	21,212.58	10,688.60	(1,901.18)	122,781.99	10.10%	4.10%	-124,683.17	0.00
60,000.00	21,212.58	10,688.60	28,098.82	122,781.99	10.10%	4.10%	-94,683.17	1,665.33
90,000.00	21,212.58	10,688.60	58,098.82	122,781.99	10.10%	4.10%	-64,683.17	7,036.15
120,000.00	21,212.58	10,688.60	88,098.82	122,781.99	10.10%	4.10%	-34,683.17	16,069.58
150,000.00	21,212.58	10,688.60	118,098.82	122,781.99	10.10%	4.10%	-4,683.17	28,740.11
180,000.00	21,212.58	10,688.60	148,098.82	122,781.99	10.10%	4.10%	25,316.83	45,030.21
210,000.00	21,212.58	10,688.60	178,098.82	122,781.99	10.10%	4.10%	55,316.83	64,926.48
240,000.00	21,212.58	10,688.60	208,098.82	122,781.99	10.10%	4.10%	85,316.83	88,418.07
270,000.00	21,212.58	10,688.60	238,098.82	122,781.99	10.10%	4.10%	115,316.83	115,495.87
<b>279,000.00</b>	21,212.58	10,688.60	247,098.82	122,781.99	10.10%	4.10%	<b>124,316.83</b>	<b>124,316.83</b>
300,000.00	21,212.58	10,688.60	268,098.82	122,781.99	10.10%	4.10%	145,316.83	146,152.00
330,000.00	21,212.58	10,688.60	301,098.82	122,781.99	10.10%	4.10%	175,316.83	180,379.58
Apartment Price (US\$)	Operational Costs (US\$)	Land Tax (US\$)	V (Net Income) (US\$)	I (Investment) (US\$)	$\alpha$	$\sigma$	V-I (US\$)	Real Option (US\$)
30,000.00	0.00	10,688.60	26,333.80	54,669.47	6.30%	7.60%	-28,335.67	3,564.15
60,000.00	0.00	10,688.60	63,356.19	54,669.47	6.30%	7.60%	8,686.72	19,216.59
90,000.00	0.00	10,688.60	100,378.58	54,669.47	6.30%	7.60%	45,709.11	46,475.07
<b>102,000.00</b>	0.00	10,688.60	115,187.54	54,669.47	6.30%	7.60%	<b>60,518.07</b>	<b>60,518.07</b>
120,000.00	0.00	10,688.60	137,400.98	54,669.47	6.30%	7.60%	82,731.51	84,896.96
150,000.00	0.00	10,688.60	174,423.37	54,669.47	6.30%	7.60%	119,753.90	134,197.17
180,000.00	0.00	10,688.60	211,445.76	54,669.47	6.30%	7.60%	156,776.29	194,165.65
210,000.00	0.00	10,688.60	248,468.16	54,669.47	6.30%	7.60%	193,798.69	264,636.52
240,000.00	0.00	10,688.60	285,490.55	54,669.47	6.30%	7.60%	230,821.08	345,473.00
270,000.00	0.00	10,688.60	322,512.94	54,669.47	6.30%	7.60%	267,843.47	436,558.91
<b>279,000.00</b>	0.00	10,688.60	333,619.66	54,669.47	6.30%	7.60%	278,950.19	<b>465,867.92</b>
300,000.00	0.00	10,688.60	359,535.33	54,669.47	6.30%	7.60%	304,865.87	537,793.43
330,000.00	0.00	10,688.60	396,557.73	54,669.47	6.30%	7.60%	341,888.26	649,087.58

savings procedure would be optimized when the apartment market value reaches an optimum market price and as a consequence in this analysis, the families would have a higher financial saving since the supposed payment would be elevated. The real option trigger point at which the saving strategy would be optimized by the family is when the apartment cost reaches a US\$ 102,000. Values below that indicate that the savings are not yet optimized and that the decision-maker should maybe consider changing its money saving strategy. Obviously, different from the acquisition case described before, we don't have "wait for better market conditions" or a "sell the property" decision since the family doesn't own the property. So the optimization in this case is on how to optimize the savings. We can see that the option value here would be zero only for very low apartment market prices generating very small savings that would be reflected on an extremely low net income (V). As we can observe on table one even with a US\$ 30,000 apartment value the option has a considerable positive value due to expectation of strategy optimization based on the expectations from the renting market. The savings strategy is influenced by both the selling market environment and the rent market conditions. In this paper we simplify the analysis considering only the second. Applying traditional method decision rules there would be a sub-optimal family financial plan optimization since it would indicate optimality with apartment prices between US\$ 30,000 and US\$ 60,000 where the present value of the difference between net income (V) and Investment (I) is higher than zero. Option minimum value at the optimal model's trigger point is above US\$ 60,000.

After explaining the results regarding the model's basic results we can now use it to compare both personal projects. The acquisition of the apartment (personal project 1) has its "go ahead and sell the property" decision trigger point with a market value of US\$ 279,000 with a real option optimum value of US\$ 124,316.83, considering an investment some periods before at a little over US\$ 122,000. Looking in the lower part of table 1 we can see that the real option value of "personal investment 2", the financial savings strategy of keeping 100% of the money saved from avoiding mortgage, when the apartment has a US\$ 279,000 market value it would generate a US\$ 465,867.92 real option value of 3,75 times higher than the decision of acquiring the apartment.

Using traditional technique in the valuation, the rent decision would be only 2,24 times superior. It is evident that in the simulated situation the rent decision would be better. But what are the main reasons for that much higher real option value? The real option model is sensitive to the volatility parameter due to positive effects of expectations regarding the positive oscillations of the uncertain variable. The rent case has a volatility parameter 85% higher than the apartment acquisition and selling case. Another reason is the difference among both net incomes (V) where the savings amounts are 34% greater than the net capital gain from apartment future sale.

When we change the family's saving profile we can have different result to the analysis. If the family is able to save even more than the total 100% difference between what would pay monthly of mortgage and the rent price, obviously the real option value of rent decision would be even better when compared to apartment acquisition case. For example, a 150% saving level of the difference generates an option value at the optimal apartment selling price (US\$ 279,000) 85% (US\$ 860,000) higher than in the base case of table 1. But that probably is not the profile of the majorities of families that have other a considerable quantity and amount of periodically expenditures and savings would easily be below the base case 100% of the eventual mortgage – rent difference. Let's suppose that the percentage falls to 75% of the difference. At that savings level there is an option values of US\$ 312,187. Still a good savings profile since the renting option value is more than 2,5 times the option value of the acquisition option (US\$ 124,316). With a 50% savings profile a family continues to make a better deal by renting, with an option value of US\$ 188,000).

If we consider a family with elevated difficulty of savings, let's say a household that saves only 5% of the difference, consequently with its renting net income (V) very low the renting decision is a worst choice than the apartment buying for future optimal price selling decision. The option value of this almost no saving situation is only of US\$ 41,709, close to three times less than the apartment buying case with future selling at its US\$ 279,000 optimal price. We can estimate a break-even saving percentage at which separates the families with a profile for renting and households with an acquisition profile. Savings profiles above 34% of the difference "potential mortgage value – rent" should choose the apartment rent deal, while families with a low saving profile under this break – even percentage would get a better personal investment with the acquisition decision. The real option value at a 34% savings profile is of US\$ 124,525, slightly over the optimal acquisition option value observed in the upper part of table 1.

## **Discussion**

Real options models are tools fit to make economic personal projects evaluation. The presence of all kinds of uncertainties in personal financial decisions turn these models into very useful decision-making support. Real estate personal decisions demand a variety of studies regarding its decision-making and the demystification of everyday financial common sense. The housing decisions are functions of a diversity of important uncertain variables and should not be treated as a deterministic rule. Decision – making depends on level of uncertainty, market price growth, costs and taxes involved and mainly on the family profile concerning its behavior towards personal income management. So this real options model tries to demonstrate the importance of considering the uncertainty in the financial analysis as well as the family's savings profile.

### **Limitation**

Here we concentrated the analysis on a simulation of a particular case to introduce the real options application on this kind of problem. A full study considering different types of uncertain variables, miscellaneous income family's level and its behavior towards savings, different cities and neighborhoods, among other important variables, should be considered. The analysis will be more complete as it amplifies the observation of decision-making regarding real estate considering a variety of possible variations.

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## **Linkage amongst Emerging Asia-Pacific Equity Markets : An Empirical Overview**

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### **Abstract**

Diversification of a portfolio helps to spread risk over many assets and gives assurance of obtaining the anticipated return on the portfolio. An international investor making investments in different equity markets may be interested to know if diversification can generate gain or not. They are also keen on understanding the intensity of equity market integration for diversification motives. Thus, it becomes essential to examine the interdependence amongst emerging Asia-Pacific equity markets viz. India, Hong Kong, China, Taiwan, Singapore, South Korea, Japan, Malaysia and Indonesia. Interdependency amongst equity markets is studied primarily through correlation of returns and the granger causality test. The results show that Japan has a strong influence over other Asia-Pacific markets. Since Japan market is the largest in Asia, it is an important player in the market. Japan market has a high correlation but low granger causality relation with other Asia-Pacific markets. China market has increased rapidly and is considered as one of the largest markets in Asia-Pacific. Comparing with its strong business linkage with other countries, China's equity market has a low correlation with other Asia-Pacific markets. India, Malaysia, Hong Kong, Singapore, South Korea, Taiwan, and Indonesia markets show relative a strong correlation and a weak granger causality relation amongst each other.

**Keywords:** Diversification, Asia-Pacific Equity Markets, Interdependence, Correlation and Causality Tests

### **I. Introduction**

Diversification of a portfolio helps to spread risk over many assets and gives assurance of obtaining the anticipated return on the portfolio. In a diversified portfolio, some securities may not perform as expected but others may exceed the expectation and making the actual return of the portfolio reasonably close to the anticipated one. An investor can opt for international portfolio diversification to reduce risk. An international investor making

investments in different equity markets may be interested to know if diversification can generate gain or not. International diversification is sought due to dissimilarities in the levels of economic development and timing of business phase among various countries.

Since liberalization and globalization of markets have linked economics of different countries through international trade and investment, it is believed that movements of stock prices across countries are correlated. An inclusive study on equity markets' correlation for Asian Pacific economies is considered important in the present day condition as these economies are emerging economies in the world. Since 1990, the size of Asian Pacific economies and volumes of international trade in the nations have increased significantly. The high business prospects have fascinated foreign investors to invest in these economies.

### **Literature Review**

The integration amongst equity markets around the globe has been investigated by a considerable amount of works. The earlier literature pertaining to the interrelationship between equity markets provides strong indication of interlinkages due to international economic integration.

Masih and Masih (1999) analysed the long-term and short-term linkages amongst international stock markets. Their study concluded that the U.S. stock market was leader at the international level and there was a significant relationship between the Organisation for Economic Co-operation and Development (OECD) and the Asian emerging markets.

Agarwal (2000) in his empirical study supported that there exist a correlation coefficient of 0.01 between India and developed markets. Thus, he proved the integration of Indian stock market with the developed market.

Masih and Masih (2001) explored the linkages amongst major international stock indexes applying the vector error-correction modelling and level vector autoregressive models. The empirical analysis revealed the significant interdependencies between the OECD and the Asian markets and also the dominance of the U.S. and U.K. markets over the short and long run.

Darrat and Zhang (2002) explored the linkages between eleven emerging Asia-Pacific markets with US and Japan. Their study revealed that the effect of the movements of the Japan stock market on the Asia-Pacific region was only temporary. Mishra (2002) examined the international integration of India with the U.S. stock market by applying the ordinary least squares (OLS) method and cointegration technique. The study proved that NASDAQ dominated the movements of BSE. However, non-existence of cointegrating vector between BSE and NASDAQ indices signified that there was no long-run relationship between those two stock exchanges. Johnson and Soenen (2002) revealed in their study that the equity markets of Australia, China, Hong Kong, Malaysia, New Zealand, and Singapore are highly integrated with that of the Japan stock market. Kumar and Mukhopadhyay (2002) investigated the short-run dynamic linkages between NSE Nifty and NASDAQ Composite during the period 1999-2001. The study argued a unidirectional Granger causality running from the U.S. stock market to Indian stock market. Ng (2002) empirical analysis showed that there was no long-run relationship amongst the South-East Asian stock markets. Correlation analysis in his study further signified that the relationship amongst South-East Asian stock markets has been intensified.

Nath and Verma (2003) examined the three major stock markets in the Asian region, namely, India, Singapore, and Taiwan and studied the transmission of market movements among them. They concluded that there was no long-term interrelationship, and thus, there are scopes for international investors to achieve long-term gains by investing in the stock markets. Darrat and Benkato (2003) investigated stock returns and volatility relations between the Istanbul Stock Exchange (ISE) and the stock markets in the US, the UK, Japan and Germany. The study exhibited that the two matured markets of the US and the UK influence the stability of smaller emerging markets like the ISE.

Narayan, Smyth and Nandha (2004) empirically analysed the linkages amongst the stock markets of Bangladesh, India, Pakistan and Sri Lanka using Granger causality approach. The study argued that in the short run there is unidirectional Granger causality running from stock prices in Pakistan to India, stock prices in Sri Lanka to India and from stock prices in Pakistan to Sri Lanka. The study further argued that out of the four markets, Bangladesh is the most exogenous of all.

Wong, Agarwal, and Du (2005) studied the relationship of Indian stock market with that of the world market and exhibited that the Indian stock market is integrated with the matured markets of the world.

Mukherjee and Mishra (2007) analyzed the markets of 23 different countries and discovered that countries of same region are found to be more integrated than others and further identified that there are increasing tendency of integration among the markets. Hoque (2007) in his study confirmed that stock prices of Bangladesh, the United States, Japan, and India share a common stochastic trend.

Menon, Subha, and Sagar (2009) analysed the linkage of the stock markets in the Indian subcontinent with that of the major stock markets in China, Singapore, America, and Hong Kong. They established the fact that the Indian markets are cointegrated to some of the markets around the world.

Park (2010) analysed the co-movement between Asian markets. His study exposed that the Asia countries with more developed financial systems i.e., Japan, Singapore and Hong Kong showed intense linkages to the rest of the Asian countries.

Sakthivel and Kamaiah (2012) attempted to investigate the dynamic interlinkages among the Asian, European, and U.S. stock markets for the period January 1998 to June 2010. They showed that the U.S. and some of the European and Asian stock markets guide the Indian stock market. Tripathi and Sethi (2012) studied the short-run and long-run interlinkages of the Indian stock market with advanced emerging markets, viz., Brazil, Hungary, Taiwan, Mexico, Poland and South Africa from January 1, 1992, to December 31, 2009. Their study argued that the short-run and long-run interlinkages of the Indian stock market with other markets have increased over the study period. Unidirectional causality has been observed in most of the cases.

The former studies pertaining to market integration amongst world equity markets are well established but provided mixed results. Moreover, diverse strategic advancement occurring in the emerging capital markets during the globalization era has made highly desirable to test the equity market interdependencies among the emerging Asia-Pacific economies.

## **Objective**

Investors are interested in understanding the intensity of equity market integration for diversification motives. Thus, the objective of the study is to examine the interdependence amongst emerging Asia-Pacific equity markets and its relation with other markets.

## II. Method

The present study is based on secondary data. The data used in the study consist of daily stock indices of nine stock exchanges of emerging Asia-Pacific economies, namely, India, Hong Kong, China, Taiwan, Singapore, South Korea, Japan, Malaysia and Indonesia. All data are obtained from Yahoo Finance. The periodicity of the study varies and it is based on the available of the data. India (S&P CNX Nifty) starts from Jan 3, 1994; Hong Kong (Hang Seng) Dec 31, 1986; China (Shanghai Composite) Dec 19, 1990; Taiwan (Taiwan Weighted) July 2, 1997; Singapore (Straits Times) Dec 28, 1987; South Korea (Seoul Composite) July 1, 1997; Japan (Nikkei 225) April 1, 1984; Malaysia (KLSE Composite) Dec 3, 1993 and Indonesia (Jakarta Composite) starts from July 1, 1997. The daily stock index return based on the open and the close of each index is calculated for the nine major indices. Pearson correlation is used to find correlation between the stock markets returns. For causality test, Granger Causality test is used to check the causality relation amongst the stock markets. It is used to indentify whether the causality is running from one-way to the other or could run from each way.

## Hypotheses

Keeping the objectives in view the hypotheses developed for the study are

H<sub>1a</sub>: There exists no correlation between the stock market returns.

H<sub>1b</sub>: There exists a correlation between the stock market returns.

H<sub>2a</sub>: There is no Granger Causality relation amongst the stock market returns.

H<sub>2b</sub>: There is Granger Causality relation amongst the stock market returns.

## III. Empirical Results

To assess the distributional properties of stock market returns of emerging markets, descriptive statistics, namely mean, minimum maximum, median, standard deviation (SD), skewness, and kurtosis are reported in Table 1. Among the 9 indices, 3 indices have registered positive average daily mean returns. The returns range between -0.0339 and 0.0094. The highest mean return is reported for Taiwan equity market with an average of 0.0094 and it is followed by Malaysia and Japan, recording an average daily return of 0.0019 and 0.0015 respectively. However, the rest of the Asia-Pacific equity markets have recorded negative return. Moreover, the descriptive statistics exhibit a wide level of standard deviation ranging from 1.23125 for Singapore to 2.20927 for China. Lesser deviation indicates least volatile and higher deviation denotes most volatile. The skewness of the daily return is found to be positive except for China. The positively skewed implies that the daily return distribution of the market have a higher probability of earning positive return than negatively skewed. The kurtosis of the daily mean return for all

markets is excessive, thus suggesting the presence of leptokurtosis.

**Table 1**  
**Descriptive Statistics**

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
India	-1.4564	1.2430	-0.0293	1.50920	0.277	3.060
Hong Kong	-1.5366	1.6196	-0.0327	1.52898	0.290	4.953
China	-1.2834	1.6081	-0.0317	2.20927	-2.528	60.814
Taiwan	-1.1669	1.1568	0.0094	1.48110	0.206	2.566
Singapore	-1.0795	1.1206	-0.0140	1.23125	0.260	8.676
South Korea	-1.5377	1.1648	-0.0118	1.80146	0.265	3.601
Japan	-1.6866	1.5125	0.0015	1.42881	0.457	7.255
Malaysia	-1.3391	1.3200	0.0019	1.36884	1.314	56.544
Indonesia	-1.3026	1.5778	-0.0339	1.61264	0.300	6.951

The correlation coefficients of the major stock market returns of emerging economies are reported in Table 2. The results indicate that the correlations across the stock market returns are positive. The lowest degree of correlation, 0.014, is between Malaysia and China and the highest, 0.497, is between Japan and Singapore. Japan stock market exhibits profound correlations with India, Hong Kong, Taiwan, Singapore, South Korea, Malaysia and Indonesia ranging between 0.201 and 0.432. Japan market is the largest in Asia and it is an important player in the market. China market has increased rapidly and is considered as one of the largest markets in Asia-Pacific. However, China's equity market has a low correlation with other Asia-Pacific markets ranging between 0.003 and 0.071. India, Hong Kong, Taiwan, Singapore, South Korea, Malaysia and Indonesia markets show relative a strong correlation amongst each other. However, the correlations among other market returns are considered to be low. Thus the null hypothesis that there exists no correlation between the stock market returns is accepted for China. However, the alternative hypothesis that there exists a correlation between the stock market returns is accepted for Japan, followed by Singapore, Hong Kong and India.

**Table 2**  
**Correlations of Returns of the Stock Indices**

Stock Markets	India	Hong Kong	China	Taiwan	Singapore	South Korea	Japan	Malaysia	Indonesia
India	1	0.320	0.016	0.228	0.249	0.316	0.428	0.373	0.319
Hong Kong	0.320	1	0.025	0.274	0.497	0.301	0.412	0.221	0.176
China	0.016	0.025	1	0.017	0.025	0.017	0.071	0.014	0.003
Taiwan	0.228	0.274	0.017	1	0.217	0.191	0.356	0.053	0.318
Singapore	0.249	0.497	0.025	0.217	1	0.318	0.432	0.330	0.302
South Korea	0.316	0.301	0.017	0.191	0.318	1	0.223	0.258	0.208
Japan	0.428	0.412	0.071	0.356	0.432	0.223	1	0.271	0.201
Malaysia	0.373	0.221	0.014	0.053	0.330	0.258	0.271	1	0.209
Indonesia	0.319	0.176	0.003	0.318	0.302	0.208	0.201	0.209	1

Granger Causality tests involve examining whether there exist a significant Granger Causality and if it exists, then in which direction such causality exists among various stock markets. Table 3 presents a comparative statement of pair wise Granger Causality tests of each pair of market under study. By viewing the table, it is clear that India



market index returns Granger cause the index returns of Hong Kong, Singapore and Japan. Hong Kong market index returns Granger cause India, Singapore, South Korea and Indonesia. Japan Granger causes Hong Kong and Singapore. The empirical results also confirm a both ways Causality with other indices. Among any two of Singapore, South Korea and Indonesia, the Granger Causality runs from each way to the other. China, Taiwan and Malaysia markets are exceptions. These markets do not Granger causes any other market, nor are Granger caused by any other market. Thus the null hypothesis that there is no Granger Causality relation amongst the stock market returns is accepted for China, Taiwan and Malaysia. However, the alternative hypothesis that there is Granger Causality relation amongst the stock market returns is accepted for rest of the stock markets.

**Table 3**  
**Granger Causality Tests**

Stock Markets	India		Hong Kong		China		Taiwan		Singapore		South Korea		Japan		Malaysia		Indonesia	
	F-Stat	Prob	F-Stat	Prob	F-Stat	Prob	F-Stat	Prob	F-Stat	Prob	F-Stat	Prob	F-Stat	Prob	F-Stat	Prob	F-Stat	Prob
India			1.633	0.002*	3.665	0.321	2.034	0.231	8.365	0.003*	3.623	0.515	1.368	0.006*	3.036	0.068	1.897	0.221
Hong Kong	2.135	0.002*			0.107	0.358	1.061	0.134	10.85	0.026*	2.337	0.012*	0.162	0.411	0.014	0.075	4.248	0.026*
China	4.116	0.328	1.765	0.134			1.713	0.085	0.741	0.217	0.431	0.287	0.736	0.821	0.537	0.059	0.126	0.348
Taiwan	2.874	0.264	0.158	0.171	1.971	0.074			1.134	0.139	0.119	0.566	0.916	0.607	1.648	0.087	0.366	0.237
Singapore	0.455	0.087	0.612	0.790	0.347	0.626	1.768	0.121			2.814	0.026*	1.487	0.513	1.312	0.063	6.103	0.022*
South Korea	3.351	0.053	1.411	0.604	0.854	0.832	0.930	2.416	2.369	0.031*			2.365	0.257	4.719	0.072	2.634	0.010*
Japan	0.877	0.475	4.053	0.023*	0.592	0.213	1.113	0.131	3.282	0.045*	1.067	0.114			0.563	0.088	0.174	0.554
Malaysia	1.583	0.622	3.212	0.091	1.766	0.192	0.965	0.077	1.055	0.072	1.355	0.070	0.321	0.084			3.638	0.217
Indonesia	1.030	0.322	1.642	0.089	0.194	0.400	1.216	0.062	7.363	0.000*	1.091	0.033*	0.685	0.871	0.372	0.931		

#### IV. Conclusions

##### Results and Discussion

The present study empirically investigated the dynamic linkages amongst emerging Asia-Pacific equity markets, namely, India, Hong Kong, China, Taiwan, Singapore, South Korea, Japan, Malaysia and Indonesia. Interdependency among stock markets is studied primarily through correlation of returns and the Granger Causality test. The results showed that Japan has a strong influence over other Asia-Pacific markets. Since Japan market is the largest in Asia, it is an important player in the market. Japan market has a high correlation but a low Granger Causality relation with other Asia-Pacific markets except for India. China market has increased rapidly and is considered as one of the largest markets in Asia-Pacific. Comparing with its strong business linkage with other countries, China's equity market has a low correlation with other Asia-Pacific markets. India, Malaysia, Hong Kong, Singapore, South Korea, Taiwan, and Indonesia markets show a relative strong correlation and a weak Granger Causality relation amongst each other. The results of Granger Causality test revealed that there are strong equity market interdependencies and dynamic interactions amongst the nine emerging Asia-Pacific economies. This result implies that investors can gain feasible benefits from international portfolio diversification.

##### Limitation

The present study is based on dynamic linkages amongst nine emerging Asia-Pacific markets. Further study could also be put forward with respect to all other major stock markets of the world.

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## Impact of Regulatory Support on Absorptive Capacity

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### Abstract

Since Cohen and Levinthal introduce Absorptive capacity (ACAP) as an important construct for organization in 1990, it produces great impact for researchers to study ACAP. Researchers have studied many factors that impact ACAP, such as industry's competition and organization's experience. Among those factors, regulatory support has not been tested empirically as an antecedent of ACAP. We choose banking industry in Indonesia as research's sample, because of two reasons. First, banking is one of a highly regulated industry. We expect the impact of regulatory support will be higher than in medium or low regulated industry. Second, we choose Indonesia because Indonesia is one of a developing country. And in developing country, the impact of regulation on organization is higher than in developed country. We run regulatory support together with competitiveness and experience as other antecedents of ACAP. There are 49 banks participated, and it represents 52% of the total population, based on capital. By using variance based Structural Equation Modeling, results show that regulatory support and experience significantly affect ACAP, while competition is not.

Keywords: regulatory support, absorptive capacity, organization experience, competition, Indonesia banking industry

### I. Introduction

Absorptive capacity (ACAP) is an important construct for practitioner and researcher, especially in management and organization field (Lane, Koka and Pathak 2006; Jimenez, Angelov and Rao, 2012). Therefore, researchers already studied and reveal many factors that impact ACAP, which come from external and internal organization. External factors that impact absorptive capacity such as competition (Lev, Fiegenbaum and Shoham, 2009), collaboration with university (Cockburn and Henderson, 1998), network structure (Yongping, Yanzhenga and Haomiao, 2011), domestic innovation environment (Sofka, 2008), innovation cooperation (Murovec and Prodan, 2009), R&D co-practice (Frost and Zou, 2005), collective research center (Spithoven, Clarysse and Knockaert, 2010), intra-district shared competence (Camison dan Fores, 2011). While internal factors that impact ACAP such as knowledge stock accumulation (Yongping, Yanzhengan and Haomiao, 2011; Park, 2011), knowledge base (Ahuja and Katila, 2001), R&D methodology (Nicholls-Nixon dan Woo-2003), experiences or routines (Eriksson and Chetty, 2003), and experience operate in many places (Denison, Dutton, Kahn and Hart, 1996).

To the best of our effort, there is no research using regulatory support as an antecedent of ACAP. Regulation support plays an important role in highly regulated industry such as banking. Regulatory support is a key factor in developing internet banking (Sivanand, Geeta dan Suleep, 2004), adoption of electronic banking by Small Medium Enterprise (Riyadh, Akter and Islam, 2009) and adoption of innovation (Zhu, Kraemer and Xu, 2006).

Regulatory support with tested with two other factors, that empirically prove as factors that impact ACAP. There are competition and experience. This model will be tested in the object that regulator plays an important

rules. Therefore we choose banking Industry as highly regulated industry (Garcia-Canal and Guillen, 2008; Ali and Afzal, 2012). We choose Indonesia as developing country, because impact of regulation is higher in developing country compared to developed country (Zhu, Kraemer and Xu, 2006). Number of available banks in Indonesia (120 banks) is another reason.

## II. Literature Review

### 2.1. Absorptive Capacity

Cohen and Levinthal (1990, 128) defines ACAP as the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends. Zahra and George (2002) define ACAP as a set of organizational capabilities by which firms acquire, assimilate, transform, and exploit outside knowledge to produce a dynamic capability. Moreover, Flatten Engelen, Zahra & Brettel, (2011) uses those for capabilities as dimension of ACAP.

### 2.2. Regulation Support

Based on institutional theory, formal regulation could support or repress industry coersively to do something or to prohibit doing something (DiBaggio dan Powell, 1983). This pressure will be bigger in developing country than developed country, and will be bigger in the highly regulated industry.

Regulation plays important rules for organization. Regulatory support has impact on financial performance (Liao dan Yu, 2012). It has impact on developing internet banking (Sivanand, Geeta dan Suleep, 2004), influence bank's intention to adopt internet banking (Shi, Shambare dan Wang, 2008), especially in Small Medium Enterprise (Riyadh, Akter and Islam, 2009) and adoption of innovation (Zhu, Kraemer and Xu, 2006). Moreover, Zhu, Kraemer and Xu, (2006) also proof that regulatory support is important for banking to assimilate e-business. Eventhough different, their definition of assimilation is similar with ACAP.

**Hypothesis 1:** There will be a positive impact of regulatory support on ACAP

### 2.3. Competition

Competitiveness is one of external factors directly facing by company (Cummings and Worley, 2001). Company should compete to other company in the same industry. Empirical study proof that higher competition will motivate company to improve their ACAP (Lev, Fiegenbaum dan Shoham, 2009). In Indonesia banking industry, banks compete directly with other banks that have similar size, and compete indirectly with other unsimilar size bank.

**Hypothesis 2:** There will be positive impact of higher competition on ACAP

### 2.4. Experience

The experience is one factor, which from the beginning, said to affect ACAP (Cohen and Levinthal, 1990). Definition of experience is not much debated or discussed by the researchers. Generally, researchers use "once or not" do something, or participate directly in an event, as a proxy of experience. For example is the Xia, Ball, Delios (2009), which measures the experience of "overseas expansion". If the company had never done overseas expansion, the company is considered inexperienced to expand abroad. Another example is Li and Zhang (2007) in defining "experienced manager". The more often a manager has held the position of manager, the more experienced he is.

Previous empirical studies, proved that experience, in various contexts, affecting ACAP. Experience and stock of knowledge, has been proved as a factor affecting ACAP (Yongping, Yanzhenga and Haomiao, 2011; Park, 2011, Shipilov, 2009; Sofka, 2008). Likewise, the diversity of experience of alliances (George, Zahra, Wheatley & Khan, 2001). The experience of having operated in different geographical locations (Denison, Dutton, Kahn and Hart, 1996), and the cumulative and diversity of experience (Eriksson and Chetty, 2003).

**Hypothesis 3:** There will be positive impact of experience on ACAP

### III. Research Method

#### 3.1. Sample

Object of this research is the banking industry in Indonesia. The number of banks in Indonesia is 1789 banks. The number of commercial banks is 120 banks; while the number of "rural bank" is 1669 bank. Although few in number (120 pieces bank), but the contribution of commercial banks is very much dominant in the Indonesian economy. For example in terms of lending, 120 commercial banks accounted for 98%, while rural banks only accounted for 2% (www.bi.go.id). Therefore, this study uses a commercial bank as samples.

#### 3.2. Questionnaire

Research questionnaire developed from previous empirical studies and modified according to the research context of the banking industry in Indonesia. To measure ACAP, we use a measuring instrument from Flatten, Engelen, Zahra and Brettel (2011). ACAP is measured using four dimensions: capability to acquire external knowledge, capability to assimilate of external knowledge that has been gained, capability to transform knowledge according to the conditions of each bank and capability to exploit of knowledge that has been transformed. Regulation support from formal banking's regulator in Indonesia is measured by perception of top manager of the bank. It is about how strong the regulation encourages banks to develop his ACAP. The questionnaire developed from questionnaires ACAP from Flatten, Engelen, Zahra and Brettel (2011).

Measurement of competitions using two dimensions, competition within the same grup (based on capital) and competition between other groups. Measurement of competition modified from Lev, Fiegenbaum dan Shoham (2009). Measurements of experience using a measuring instrument developed by Eriksson and Chetty (2003), using two dimensions, namely the diversity of experience and the amount of cumulative experience. Proxy to measure the amount of cumulative experience is using age of banks. The test results prove that the questionnaire is valid and reliable. Item's loading factor between 0.52-0.95; AVE between 0.62-0.85; composite reliability between 0.88-0.97.

### IV. Result and Discussion

This research model will be tested simultaneously using Structural Equation Model (SEM) variance based (or components based). This is not covariance based that already better known and more attractive to scientific researchers (Haenlein and Kaplan, 2004). Covariance-based SEM is better in testing theoretical models compared to Variance-based SEM, but both are actually have equal test results (Hair, Ringle and Sarstedt, 2011). But the covariance-based SEM also has limitations. The number of samples to be much the bank totaled 200-800 (Stan and Saporta, 2005), whereas banks that meet the criteria of this research is only 120. Especially when considering the rate respond manajemen strategic research in Indonesia, such as Tarigan (2012), has only respond rate of about 6%.

Details of the test results can be seen in Figure 1.

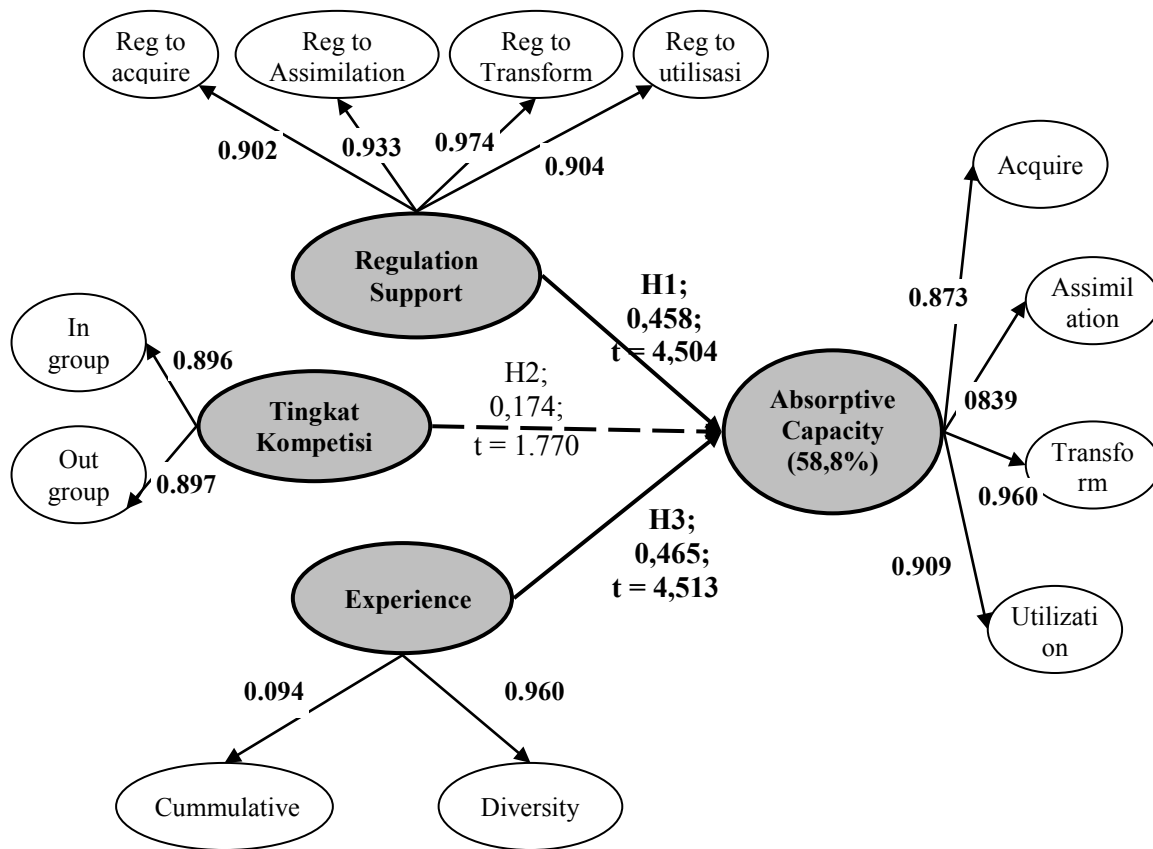


Figure 1. Test results of the research model

From the figure above shows that the regulatory support, positively and significantly, affect ACAP (H1 accepted). Regulation could encourage banks to increase their ACAP. Effect of regulatory support to ACAP (0,458), is comparable with effect of experience on the ACAP (0,465). Experience had already proven, in many previous empirical studies, affecting ACAP. This means that in the context of the banking industry (highly regulated industry) in Indonesia (as a developing country), regulatory support is one of an important antecedent of ACAP. To the best of my knowledge, "regulatory support" has not been studied empirically, as the antecedent ACAP. This is the main contribution of this study.

This study shows that the positive effects of competition on ACAP, not significant (H2 rejected). This research differs from Lev, Fiegenbaum and Shoham (2009), which proved that increasing competition encourages hospitals improve their ACAP. To better understand this, the researchers conducted interviews with two banking experts. Based on their experience and expertise, if competition increases, the bank's main focus is not to increase the capabilities. Such actions would be the stock of knowledge, which in turn, can increase the ACAP.

Another result shows that experience proved to be one important factor in improving the ACAP (H3 accepted). These results enrich the results of previous studies, that in the context of banking in Indonesia, the role of experience remains important. The interesting thing is the dominant contribution to the diversity of experiences as a dimension of experience. It is much more dominant than the cumulative experience. This means that the diversity of experience is more important compared to a cumulative experience.

Another result of this study is the three factors used in this study (regulation support, competition, experience), collectively able to explain 58.8% of ACAP. There are still 41.2% explained by other factors that are not used in this study. Recapitulation of hypothesis testing can be seen in Table 1.

**Table 1.**

**Hypothesis Testing Results \*\***

Hypothesis	Path	Coeffisien structural	t value*	Conclusion
<b>H1</b>	<b>Regulation support → ACAP</b>	<b>0.458</b>	<b>4.504</b>	<b>Accepted</b>
H2	Competition → ACAP	0.174	1.770	Rejected
<b>H3</b>	<b>Experience → ACAP</b>	<b>0.465</b>	<b>4.513</b>	<b>Accepted</b>

\*  $\alpha = 5\%$ ,  $t > 1.96$  \*\* Using Smart PLS 2.0

**V. Conclusion and Suggetions**

Overall, this study and the results were considered good, based on parameters such as the number of respondents who fairly represent the population (52% of the total population; based on capital), the questionnaires used valid and reliable, the achievement of the main objective research proves that regulatory support as antecedent ACAP.

Results of this study can also be used by banking regulators Indonesia as one of the bases for issuing regulations that support ACAP or reduce regulations that impede ACAP. Related to with the competition, the regulator also get one of the foundations that increase or decrease the level of competition does not affect ACAP, thus increasing the competition is not to be feared. Industry players can also use the results of this research by encouraging regulators to apply regulations that support the bank to increase bank ACAP respectively. Industry players can also be more motivated to enrich their experience, in particular the diversity of experiences, in order to improve their ACAP.

This study has several limitations. First, the study uses a variance-based SEM that has inherent limitations, such as the problem of consistency at large. Variance-based SEM tends to under-estimate the correlation between latent variables and over-estimates the loading (Hair, Black, Babin, Anderson dan Tathan, 2011). Therefore, further research may use a larger sample, so it can use the covariance-based SEM model testing. This study has shown the important role of regulatory support, but "regulatory support" this study is limited to formal regulation. However, further research may expand the scope of the regulation by using a non-formal regulation, such as advice and guidance from the regulator.

Context of this study is the banking industry, characterized as highly regulated industry. The study did not compare with other highly regulated industry, such as telecommunication, or compare with low related industry. This study, also, only done in Indonesia as a developing country. Future studies may expand the scope of the research object.



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# Impact of Capital Structure on the Financial Performance of the Banking Sector of Bangladesh

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## Abstract

The study is conducted to determine the impact of capital structure on financial performance of the Banking sector of Bangladesh. The study uses Return on Equity (ROE), Return on Asset (ROA) and Earnings Per Share (EPS) as dependent variables in three different models to represent the financial performance and long-term debt to capital ratio (LTDTC), short-term debt to capital ratio (STDTC) and total debt to capital ratio (TDTC) as independent variables to represent the capital structure. The study uses a sample of 19 banking firms listed on Dhaka Stock Exchange (DSE) during the period of 2008-2012. The findings of the study depicts that long-term debt to capital ratio, short-term debt to capital ratio and total debt to capital ratio have significant relationship on financial performance of the banking firms measured by ROA and EPS both whereas Return on Equity (ROE) is not significantly associated with the capital structure variables. The overall result of the study shows that capital structure has significant impact on the financial performance of the banking sector of the Bangladesh.

**Keywords:** Capital structure, financial performance, Banking industry, ROA, ROE, STDTC, LTDTC, TDTC

## **Role of organisational culture on the successful adoption of SAP system in Saudi Arabia: a case study**

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### **Abstract**

#### **Purpose**

The purpose of this study is to investigate the role of organisational culture in implementing a SAP system in a petrochemical organisation in the context of Saudi Arabia. The paper examines key organisational cultural dimensions of SAP implementation in a large Saudi organisation, and identifies core issues and strategies adopted in the successful implementation of a SAP system.

#### **Design/methodology/approach**

This study adopts a case study based qualitative research methodology. Primary data is collected through a series of interviews with project managers and implementation team at the company.

#### **Findings**

The findings reveal intricacies in SAP implementation in a Saudi enterprise. A key finding is that a well structured organisation in a developing country can overcome implementation challenges with an organisational culture of innovation and teamwork. The study finds that organisational attributes such as communication, management support, end user involvement from the early stages of implementation, and the development of a business process blueprint after rigorous groundwork are critical for implementation success. Also, the study finds that the real issue is not how to manage the implementation process, but rather how to manage the changes brought about by the new system.

#### **Research limitations/implications**

The study is based on a single case study in the petrochemical industry in Saudi Arabia which perhaps limits its usefulness to the region.

### **Originality/value**

Implementing SAP systems incorporate sets of implementation challenges. In the context of a developing country, it is particularly important to understand the complexities of SAP implementation, since these systems were initially designed for organisations in developed countries with different organisational culture and background. Due to the nature of enterprise systems, this paper examines a successful SAP implementation in Saudi Arabia and highlight organisational factors, which plays an essential role in SAP implementation. This provides a framework for future SAP implementation in developing countries, and essentially provided guidance for successful implementation.

**Keywords:** Organisational culture, ERP, SAP, Saudi Arabia

## **I. Introduction**

Enterprise Resources Planning (ERP) systems (such as SAP, Oracle, Sage, Infor, etc), are information systems that assist in all aspects of the management of businesses, including purchasing, manufacturing, production planning, sales, distribution, accounting and customer service (Scalle and Cotteleer, 1999). This is achieved through seamless integration of information flows and business processes across functional areas within businesses (Davenport, 1998; Mabert et al., 2003). ERP systems are sets of packaged software application modules with an integrated architecture which can be used by organisations as their primary engine for integrating data, processes and information technology, in real time, across internal and external value chains (Davenport, 1998).

The implementation of ERP systems creates substantial benefits for businesses. These include increases in productivity and value added (Davenport, 1998), improved operational performance (McAfee, 2002), integration and process optimisation (Davenport et al., 2004), increases in a firm's market value (Meng and Lee, 2007), and noticeable improvements in a firm's financial performance (Hendricks et al., 2007). In fact, these benefits are of such importance, it is argued that it is imperative for companies to adapt then in order to gain a competitive advantage, such as cost reductions, integration of operations and departments, business process improvement, and increasing effectiveness and competitiveness (Vlachos, 2006).

With the market growth of ERP systems and the realisation of their benefits in Europe and North America, organisations in developing countries such as Pakistan, Egypt, Sri Lanka, Iran and Saudi Arabia have embarked on the adaption and implementation of ERP systems in large numbers. These developing countries represent 10-15 percent of global ERP sales (Huang and Palvia, 2001; Rajapakse and Seddon, 2005a). This has made SAP Middle East one of the fastest growing markets for SAP globally. However, the surge in the number of Middle East developing countries implementing SAP; has been followed by reports of implementation failures (Al-Mashari and Zairi, 2000; Rajapakse and Seddon, 2005).

As ERP systems are being adapted and implemented in organisations across the globe, understanding different

national and organisational cultures becomes vital for successful implementations. This has brought research into this area to the forefront. Multiple streams of research exist on ERP implementation and the critical factors required for its successful implementation, as well as the impact of ERP on organisational performance (Al-Mashari, 2003; Holland and Light, 1999). Among several critical success factors identified and proposed, organisational culture is considered one of the most essential factors for creating and driving the potential benefits of new implementations (Romn, 1991). Indeed, if implementation conflicts with organisational culture, user resistance will result; which could lead to system avoidance, boycott, rejection or extreme customisation to match the existing culture (Cooper, 1994; Martinson and Chong, 1999). However, research remains limited on the influence of organisational culture on ERP implementation in general, and the Middle East in particular. In contrast to studies on IT/ERP in developed countries, the Middle East region has a limited number of similar studies (Maguire et al., 2010; Abdelghaffar, 2012; Hossain et al., 2011). Since, ERP systems are sets of standard business processes; designed for developed countries, implementing them in developing countries with different cultures could be challenging.

Following Baker et al. (2007) who warns that findings from IT implementation in developed countries are not necessarily applicable to developing countries. This case study examines SAP organisational culture and ERP implementation in Saudi Arabia, a major Middle East country. Besides addressing a gap in existing knowledge, the findings in this exploratory study will assist in establishing a baseline information matrix for a successful ERP implementation, and act as guidance for future research in SAP implementation in Saudi Arabia and the Middle East region.

This paper is organised as follows. First, a review of the literature on ERP, SAP, organisational culture, and IT/ERP systems in Saudi Arabia is carried out. Second, a brief overview of case study is presented followed by a presentation of the SAP implementation process and findings. Finally, some concluding thoughts are offered.

## II. Literature Review

### ERP system

ERP systems are designed to facilitate the flow of information in organisations by integrating data processing and information management activities in the main areas of business. ERP usage has impacted greatly on the transformation of many organisations (Holland et al., 1999), especially through the integration, and process control control over the processes, which provides a centralised view for top corporate executives on each entity, and a controlling matrix structure through real time information (Qauttrone et al., 2004).

Falk (2005) confirms that the introduction of new business and organisational practices are highly correlated with labour productivity. Similarly, ERP systems are becoming a platform for electronic businesses, business-to-business activities, and business to customer applications, allowing organisations to reduce their inventory costs, better manage their supply chain, and customer relationship (Beheshti, 2006). Manufacturers, suppliers, and retailers can also coordinate their activities and track items, which are the most commonly user benefits of ERP systems.

The literature shows that despite the benefits from the implementation and use of ERP systems, organisations are sometimes still reluctant to adopt them. This is due to the amount of time, money, and effort required to implement new systems, and more importantly, their perceived high risk of failure (Malhotra and Temponi, 2009).

Indeed, Davenport (1999) reports that ERP implementation is challenging, time consuming, expensive, and may place tremendous stress on corporate time and resources. Due to these impediments and implementation complexities, the literature reports that approximately 66 to 70 percent of ERP implementation projects failed to achieve their implementation objectives in some way (Lewis, 2001; Carlo, 2002; Shores, 2005; Ward et al., 2005; Zabjek, 2009). Indeed, surveys show that failure is a common experience of ERP implementation projects, and success cannot be guaranteed even in the most favorable situations (Liao et al., 2007).

### **Organisational Culture**

Organisational culture plays a significant role in ERP implementation success (Boersma and Kingma, 2005). Boersma and Kingma (2005) suggest that organisational culture can shape ERP technology and in turn, this technology influences organisational culture. Deshpande and Webster (1989) define organisational culture as a “set of shared assumptions and understandings about organisational functioning.” Whilst Hofstede (1991) describes culture as the collective programming of minds which distinguishes members of one human group from another; through a set of shared beliefs. It provides a source of rules, values and practices at the individual, organisational, and country level. Specifically, understanding culture at the country or national level is critical, as it has a direct influence on organisations.

Organisational culture has been discussed in an IT and ERP adoption context. Hofstede (1991) propose five cultural dimensions and their expected relationship with IT (including ERP). These are:

**Power distance:** refers to the inequality of the distribution of power in a culture. Centralised decision making, supported with formal rules and regulations are representative of culture in countries with a high power distance. Zmud (1982) concludes that such cultures and organisations are associated with lower rates of innovation and adoption. Research has shown that employees are more innovative when they are empowered to make decisions and have autonomy while working in a democratic environment (Mumford and Licuanan, 2004). In addition, Lee and Peterson (2000) proposed that high power distance culture usually have lower acceptance of new ideas and innovations.

**Uncertainty Avoidance:** The degree to which members of a society feel uncomfortable with uncertainty and ambiguity. The introduction of any new IT technology brings uncertainty and risks, which may vary from one culture to another (Hofstede, 1991).

**Individualism:** The relationship between individuals and the groups to which an individual belongs. People from individualistic cultures are more inclined to make their own choices, while people from collective cultures readily adapt to their group’s choices. Erumban and Jong (2007) argue that since the implementation of new technology (such as SAP) could be contrary to current group norms, countries with a strong emphasis on the group, will be less accepting of new innovation. In contrast, individuals in individualistic countries may feel free to express their own views and are inclined to innovate and adopt new ideas.

**Masculinity:** It is related to culture which emphasises on rewards and recognition of performance, and the training of individuals. Many innovative organisations follow these traits (Hofstede, 1991).

**Long term orientation:** Related to how cultures with long term orientations possess thrift and perseverance, while short term orientations are associated with respect for tradition, fulfilling social obligations and protecting one's face. Since the implementation of new technology is contrary to traditions and norms, long-term orientation cultures are more apt to the adaptation of new technology.

Despite the recognition of the importance of national and organisational culture on ERP implementation, there is little research on this area (Krumbholz and Maiden, 2001; Ke and Wei, 2005). Indeed, Moller et al. (2004) report that the organisational culture phenomenon is ignored in the ERP system literature. In addition, according to the IT literature, 66 to 70 percent of ERP implementation projects fail to achieve all of their set goals (Lewis, 2001; Carlo, 2002; Ehie and Madsen, 2005; Shores, 2005; Zabjek, 2009).

Illustrative cases of 'failure' or "near failure" in ERP implementation in the literature include organisations such as Fox-Meyer Drug, Dell, Unisource Worldwide, Inc., Dow Chemical and Hershey in which ERP implementation resulted in 'complete failure' (Cotteleer, 2002). Some of these failures are due to a lack of understanding of change management and organisational culture. These high failure rates emphasise the need for further understanding of SAP ERP implementation in developing countries, such as Saudi Arabia, since they generally lack resources and skilled IT professional during implementation.

#### **IT/ ERP related research in Saudi Arabia**

The literature is limited in the area of IT implementation in Saudi Arabia. However, it tends to focus mainly on user acceptances.

An early study by Yavas et al. (1992) focuses on the efficacy of opinion leadership approach in accelerating the acceptance of computer technology in Saudi Arabia. Similarly, Al-Gahtani (2003) examines the relationship between perceived attributes of computer technology and the rate of adoption in the workplace. The findings from this study suggest that Roger's five attributes of innovation - relative advantage; compatibility, complexity, trialability and observeability, plays a significant role towards computer technology adoption in developing countries. This is consistent with Al-Gahtani (2004) and the literature on organisational culture on ERP implementation, which shows that social and cultural influence, is able to create a better understanding of IT acceptance.

Al-Alwani (2005) examines current levels of information technology integration in a Saudi Arabian school district, and finds that lack of infrastructure and resources, staff development, policy and support, and science teacher's personal beliefs regarding technology are significant barriers toward IT integration.

A study into role change management, and how strategies can enhance ERP success by Allaballaa and AlMudimigh (2011) warns that change management task can differ among people affected by the implementation. In addition, Hossain et al. (2011) report that ownership and governance significantly hinder ERP implementation.

However, these barriers can be overcome. For instance, an exploratory study of ERP implementation on the trends of successful ERP implementation factors by Al-Turki (2010) finds that management commitment and the existence of clear strategic objectives are critical factors for successful ERP implementation.

Implementing ERP system is a challenging process. With little IT experience, achieving success will be



challenging for developing countries such as Saudi Arabia. Since, the extent to which research findings on the ERP implementation in the North America and European context could be generalized to Middle Eastern countries has not been widely tested, there is a need for further understating of ERP SAP implementation in developing countries, and organisational culture. This study seeks to contribute to this area by providing practitioners with valuable information about successful ERP implementation in Saudi Arabia, and the critical role of organisational culture during the implementation process, to enable them to make informed decisions.

### III. Case Study Organisation

This case study is of Omega Corporation (the name Omega Corporation is a fictional name to protect the identity of the company). Omega Corp is a leading Saudi enterprise producing chemical and intermediates, industrial polymers, fertilisers and metals. It is ranked among the world's largest petrochemical manufacturers. It employs more than 40,000 people workforce across 40 countries. It is composed of several strategic business units and manufacturing groups. Omega Corp is structured as SBUs (Strategic Business Units). SBUs are divided into Basic Chemicals, polyester & its various types, metals and specialty chemicals.

### IV. SAP Implementation

SAP adopts a methodology called accelerated SAP (ASAP) for implementing SAP solutions in a speedy and cost-effectively manner (SAP.Com, 2015). The ASAP implementation methodology is a structured implementation approach that can help managers achieve a faster implementation with quicker user acceptance, well-defined roadmaps, and efficient documentation at various stages (Esteves and Pastor, 2001). The first stage of ASAP is project preparation, followed by business blueprint, then realisation, final preparation, and finally, go live and support (see figure 1). The structure of each phase is made up of groups of work packages, structured in activities. Each activity is further composed of groups of tasks. For each task, a definition, set of procedures, results and roles are provided in the ASAP roadmap documentation (Esteves and Pastor, 2001).

Omega Corp's SAP implementation using the ASAP methodology started in 2007, and was implemented in phases. In the first phase, project systems, procurement, HR, and a finance module were planned. Before embarking on the implementation process, Omega Corp extensively used the shared services of different service providers. Dealing with different service providers in Saudi Arabia and across the globe, necessitate integration of all business functions, for which SAP is suitable.

The next sub-sections discuss each ASAP implementation phases at Omega Corp:

#### **Project preparation**

Project preparation is the start of a new project or new phase. This phase provides a path for projects in terms of organisational strategy to deal with project scope and constraints. To achieve this, stakeholders were identified and analysed in order to align their project expectations. During this phase project are signed off, project charter developed, project team formed to control and oversee the actual implementation, and responsibilities assigned. In addition, hardware orders are processed, and high-level scope documents are determined and recorded in a scope

document.

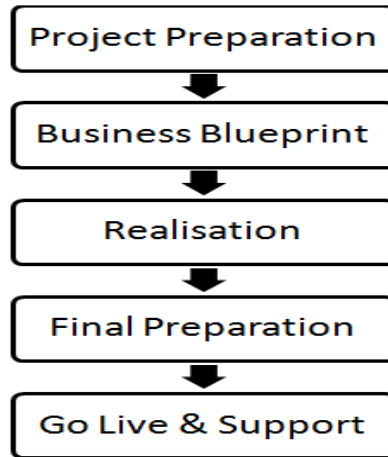


Figure 1. ASAP methodology

### **Business Blueprint**

In the business blueprint phase, the scope of SAP is defined. Business Blueprint is a detailed set of documents presenting Omega Corp's requirements. Interviews, workshops, informal chats, observations, and surveys assist the team to decide which business processes are to be implemented. For example, in the HR department, all business activity performance such as performance management, personnel management, pay roll, pay incentives, taxation, and career succession are analysed and documented. The primary activities of this phase involve the review of information flow, recording business processes, defining external system interfaces, and new policies and procedures. Simultaneously, a team of consultants mapped each business process in Omega Corp to standard SAP process.

The end result of the business blueprint, is signing off the organisation's business requirement document. This document entails the definition of all the business processes. The new SAP is based on this document, which then serves as the framework for the completed SAP implementation. Any deviation from this framework document will negatively impact the project. It took the team around 45-60 days to finalise the blueprint documentation.

### **Realisation**

The realisation phase involves the configuration and customisation of the business processes identified in the business blueprint, and consists of two parts. First, the SAP consulting team configures the organisation's baseline system (referred to as baseline configuration). Second, the project implementation team makes adjustments to the new system to cater for the need of Omega Corp.

During the realisation phase, the system is configured and then uploaded to master data on the test system. Users are introduced to the new system to get their feedback. In addition, hands on training are provided to educate end users in day-to-day system applications. This phase also involves extensive organizational communication to ensure everyone stays abreast of developments.

### **Final Preparation**

In the final preparation phase, all the activities of the previous phases are consolidated. Workload testing and integration of functional testing are carried out to ensure the accuracy of data and the stability of the SAP system. End user training, consultant's workshops, interaction with end users and process awareness are carried out. Generally this phase is about "site readiness" which is preparing the system for users to sign off the process. However, sometime users resist or delay the sign off to gain further understanding of the system. This phase last 90-120 days.

### **Go-Live and support Phase**

A successful Go-live phase requires planning and attention to detail. The planning involves focusing on 'what-if' scenarios, preparation for ongoing support and documenting processes. After going live the system is reviewed to ensure that the business environment is fully supported, and the system is functioning as planned.

## **V. General observations in the context of organisational culture**

i. Omega Corp is a well structure and diversified organisation. It has a wide diversity of employees representing different backgrounds, such as, Saudis, Indians, Pakistanis and Philipinos. To overcome any communication barriers, the standard medium of communication in the organisation is English.

ii. Omega Corp is a multinational company with a presence in 120 countries and field offices in 40 countries around the globe. The extensive structure has forced the top management team to adopt a centralised decision making system, which was necessary due to the extensive number of offices, locations, and products.

iii. The workforce experience varied considerably. The time span of employees association with Omega Corp varied from two to thirty years.

iv. Being a global organisation, Omega Corp employs several business processes functioning at global level. However, there are certain processes that are performed at an affiliated business level. Often when global processes are implemented, employees at affiliate level resist since they consider these processes to be irrelevant to them. This resistance is overcome by explaining the necessity of global business processes to end users. Otherwise there will be no standardised global processes, and system maintenance, system usability, training, and system support will be impossible. End user resistance can be further overcome by involving users in the realisation phase, where they will be involved in writing the test script, performance testing, hands-on practice on the live system and final mass training in the final phase. This will help to improve the level and acceptability of the new system.

v. It was observed that employee's inclination to learning across the organisation varied. Employees level and reasons for interest in learning can be sub-divided into three groups. The first group of employees were the real learners, who were inclined to learn at every possible opportunity, while second group of employees were inclined towards learning for their personal gains which was to acquire SAP power user title and implementation experience on their CV and then leave the organisation. The third group of employees was not interested in learning at all and resisted every attempt to learn.

vi. Top management support was available throughout the duration of the project. The management team was involved in decision making, and ensuring that resources were available.

## VI. Issues during implementation

i. The biggest challenge faced during the implementation process was to balance the demands of a growing organisation and implementing SAP system. It was difficult to synchronise people's time with the implementation process and existing projects. Other major projects running simultaneously with SAP implementation included DCS system for the plant, PWIM systems to connect the entire plants and document management system.

ii. The extensive work requirements and schedule overwhelmed power users which directly impacted their self confidence in understanding the processes and implementation. The extra work requirements also created time management issues since employees were already working extra hours.

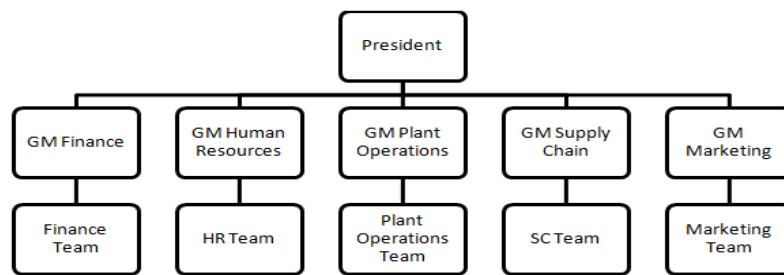


Figure 2. Organisational structure of Omega Corp

iii. The most challenging part of the implementation was the implementation of global processes.

iv. User resistance was observed across all phases of the implementation process. To minimise user resistance, Omega Corp implemented a resistance management training program. This program trains the managers and power users in how to deal with employees who resist implementation. Different methods adopted to minimize resistance included communication, open discussions, rewards system, etc. In extreme scenarios, top management was requested to get involved to overcome the resistance.

v. Managing and coordinating several teams and their sub teams simultaneously proved challenging. At Omega Corp, at any given time several teams were working including a base team (for hardware, database and user authorisation), technical team called ABAPERS (for development, customization and report development), business intelligence team and cloud solutions team. Moreover, there were consultants for finance, costing, profitability analysis, material management consultants, logistics, project systems, HR consultants, plant maintenance, production planning and quality management.

vi. During the course of implementation peer rivalry was observed among employees. This was related with the desire of career progression and internal office politics.

## VII. Major Findings

There are several findings from the successful SAP implementation at Omega Corp. The following sections present the findings:

i. User involvement: It is critical for project progress and success that users are involved in the implementation process. Involving users from an early stage will improve system acceptability level, minimise resistance and give users a sense of process ownership.

ii. Team formation: A team with diverse experiences and background is ideal. At Omega Corp, the SAP implementation team was diverse in terms of experience, age, work background, nationalities, education and skills.

iii. Power users: They play a critical role during implementation and after Go live phase. Power users are highly trained people who are effective in supervising, training and monitoring end users across the organisation. This strategy was very successful in Omega Corp which had on average 20 end users supported by 2 power users in each department for providing on-site support.

iv. Job loss threat: A major concern arising from the new implementation is a job loss threat. To overcome this threat, Omega Corp adopted an open communication strategy to gain employees confidence in the new SAP system, and regularly updated users on how the new system would impact on their job efficiency, performance, and improve their learning.

v. Motivation and reward system: In order to motivate employees who resisted being part of the initiative and lack motivation, Omega Corp initiated a reward system, where a 10 percent bonus was tied to their job performance in their appraisal. Besides the bonus scheme, there were 3 to 4 prize distributions ceremonies organised as community gatherings and were attended by top management. There were also employees' appreciation events in local hotels, where the President and General Manager of Omega Corp were invited to meet and encourage the participants. It should be noted here that at Omega Corp, the rewards were given at the end of the project not during the project. The reason behind this was not to create hierarchy within the project, which is not rewarding one person over another. Employees were rewarded equally based on their performance.

vi. Change management: During any implementation, the primary issue is not the new system or learning, rather it is about how to manage the change. Most organisational implementations fail, because of the lack of a change management strategy.

vii. Phased implementation: If there are several projects running simultaneously, or if implementation scope is vast, it is advisable to adopt a phased implementation. Phased implementation provides an opportunity to focus on a specific phase rather than the whole implementation. This could lead to a better resource allocation, more hands on training and more importantly, a higher chance of success.

viii. Communication: Good communication played an essential role in SAP implementation success. A standard communication mechanism was set up by management at all levels, and users were encouraged to communicate among themselves using the mechanism. Different methods adopted for communication included meetings, conference calls, process workshops, monthly magazine, newsletter, web sites, and morning huddles.

ix. Issue register: An updated issue register is essential for effective project management. At Omega Corp, issues were logged into the issue register. Once the solution was found, it was recorded in the register with a resolution date for future reference.

x. Employees training: After Go-live phase, it was observed that 90 percent of reported issues were related to training and system knowledge, while only 10 percent were related to bugs and performance problems, etc. This

suggests that a comprehensive training program could significantly reduce the number of issues giving management an opportunity to focus on other major areas.

xi. System acceptance: Employee's age played a critical role in SAP implementation acceptance at Omega Corp. It was observed that senior employees had a hard time in accepting the change and resisted. In contrast, younger employees and fresh graduates adopted the system and the changes very easily.

xii. Celebration: Different milestones were celebrated to motivate and encourage the employees. This also created a sense of accomplishment among employees.

xiii. Decision Making: The decision making process should involve all stakeholders who have an interest and knowledge of the system. For high-level decisions, a steering committee should get involved.

xiv. A SAP system is based on best business practices from the industry. SAP take inputs from more than 25000 partner organisations on regular basis and update and design the systems accordingly. Therefore it is advisable to implements SAP system without customisation to reap the complete benefits of the system. Still, according to SAP consultants, implementing organisation usually have two choices, in case of a mismatch between standard SAP processes and organisation processes. Either the organisation moves the processes to the system and customise it, or find a middle ground which involves some customisation and adoption of SAP standards.

## VIII. Conclusion

### Results

In this paper, we carry out a case study on the traits of organisational culture in a Saudi company that is conducive to SAP ERP implementation. Our findings suggest that a well planned implementation strategy, supported by teamwork, communication and a change management strategy can overcome the barriers produced by lack of experience and uncertainty caused by a new system.

The work presented in this paper offers several contributions, and identify several managerial implications. First, it suggests that an innovative and well structured organisational culture can overcome the complexities offered by new SAP ERP systems. Second, from the change management perspective, this study suggests that any new IT implementation has more to do with managing the change process, rather than the technical aspects of implementation. Third, user training has a direct impact on the number of post implementation issues. Generally, it is observed that 90 percent of post implementation issues arise from lack of system training, and not by the system itself. Finally, a reward system can be a good a source of motivation when applied across teams equally.

### Discussion

This study presents a successful SAP implementation in a Saudi organisation. The introduction of SAP ERP implementation in any organisation brings with it a set of challenges. In order to deal with these challenges efficiently, a clear understanding of organisational culture, which is a set of shared assumptions and an understanding about organisational functioning, and how this contributes towards the success and failure of IT implementation in organisations is critical.

### Limitation

There are limitations to this study. First, the study focuses on the critical success factor of organisational culture

exclusively. However, in the literature, there are several other critical factors, which could also play a critical role during the implementation process. Secondly, this is a case study of a single Saudi organisation, and therefore may not be generalisable to other organisations in developing countries. Despite these limitations, the study contributes to knowledge by providing an elaborate understating of successful SAP implementation and how organisational culture can positively influence the outcome of SAP ERP implementation.

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# Factors Affecting Individual Domestic Investors to Invest in Securities through Capital Markets in Tanzania

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## Abstract

The capital market in Tanzania is classified as emerging meaning that it is underdeveloped or at best developing. Securities market in Tanzania emerged as a result of the structural transformation of the Tanzanian economy. As a result of these reforms, Dar es Salaam Stock Exchange(DSE) was established under the Capital Market and Securities Authority(CMSA) that act as a regulator of capital markets in Tanzania and in particular to create the necessary environment for orderly growth and development of capital markets. The absorption capacity of capital markets is more determined by the demand side because of the capacity of the buyers as investors. Nevertheless, transactions at the DSE have by and large been limited to participation of local individuals. In this regard capital markets in Tanzania is quite narrow and illiquid as it is characterized by few traded products and few participants. This study attempts to investigate on the barriers of individuals to invest in emerging capital markets with a particular focus at the equities that are traded at the DSE. Survey strategy was used to allow collection of data using a structured questionnaire and a checklist. Descriptive as well as exploratory research design was used. The study focused on existing and non-existing private investors. It was found out that the low income, few listed companies securities, lack of confidence in the listed companies, low level of public awareness about DSE, alternative investment avenues and inadequate disclosure of information about the listed companies hinders significantly individuals to invest in the stock market securities. Finally the study concluded that for the capital markets to operate efficiently and at the same time benefit both investors, strong foundation is to be built to create mechanism to increase market activity, liquidity, broaden market participation and increase the variety of instruments traded. The Government has a role to play in encouraging good investment environment so as to encourage more private investors and building confidence on individual investors. The study further suggested for the same kind of research to be conducted in the whole country so as to come up with different views and opinions concerning the efficiency of the stock market in Tanzania.

**Keywords:** Domestic investors, securities, capital markets, Dar es Salaam stock exchange

## I. Introduction

Over the past years, the economic development paradigm has increasingly shifted towards private sector approaches for achieving sustainable growth. As a result, the financial sector, and in particular, the development

of efficient equity markets, are now considered to be an essential aspects of a developing economy (Emenuga, 1997). As the African economies attempt to develop their private sectors, it is becoming clear that the growth of equity markets can offer an important catalyst for sustainable development (Osei, 1994).

The securities market in Tanzania emerged as a result of the structural transformation of the Tanzanian economy. The Capital Markets and Securities Authority (CMSA) was established in 1994. It is a regulatory and supervisory body on the capital markets. It licenses and regulates investment intermediaries and deals with exchanges together with the issuance and trade securities.

As a result of these reforms, Dar es Salaam Stock Exchange (DSE) was incorporated in September 1996. DSE is the only stock exchange market in the country. All companies wishing to be listed at the DSE must be approved by CMSA.

Trading in shares is beneficial to both investors and the listed companies (Brealey and Myers, 2003). An individual investor can benefit from shares by using it as collateral. Shares are highly liquid and are therefore accepted as security for loans/ credits. Furthermore individual investing in shares of a profit making company can benefit by earning dividend. This is a portion of a profit of a company that is paid to the shareholders in relation to the number of shares an individual holds in a company. An investor can also benefit by getting capital gain, which arises when a company makes profit and as a result value of its shares appreciate, thus an opportunity to sell the same share at a higher price.

Investing in stocks is a relatively new area for a number of Tanzanians (DSE, 2005). For a number of them, investment means buying a house or putting money in banks. Though more than eight years and half have elapsed since the operation of the DSE, the Capital Market in general is still faced with the problem of low liquidity which in turn hinders the growth of the capital market (Deloitte, 2005). As observed elsewhere, African stock markets have hardly exceeded the 10% liquidity ratio. The likely impact of poor liquidity is high price volatility and difficulties in both entry and exit (Benimabhu, 2001).

In this regard, there is a need to understand the barriers that hinder individual investors to invest in securities in the DSE and its implication to the liquidity of the market. Moreover the study will go further to investigate the reasons behind the current state including that of the already listed companies and to suggest ways that can be used to overcome the constraints that are faced by the investors.

## II. Literature Review

Emerging markets in developing countries suffer from numerous obstacles to investment, either by national as well as foreigners. These obstacles can be direct and stem from economic market regulations, or indirect such as the lack of economic and financial expansion of the stock exchange market (Derrabi et al, 2004).

Monetary and market politics, investment regulations, the lack of reliable infrastructure for the development of a market, a lack of appropriate strategies of informing investors, and the lack of personal specialized in portfolio management, are factors that keep away potential investors from investing in stock exchange markets. The economies of emerging markets are depending on the overall economic situation (Mwenda, 2000.).

In East Africa the demand for equities by individuals has been insignificant. Nonetheless, recent privatization programs and the desire for respective EAC governments to generate broad based ownership of privatized companies have produced a large number of individual investors for equities have waved in the last

two years (WB, 2002). In Kenya, the NSE has very few retail investors primarily because of limited public awareness and information about the NSE. This is evidenced by the fact that majority of individuals savers prefer, or are more comfortable investing in Co-operatives, Savings and Credit Co-operatives Societies (SACCOs), self help groups and bank deposits. In general, however, Kenya has a poorly developed savings mechanisms and instruments for channeling savings. There is also a serious problem of lack of confidence in the stock market by retail investors, who, in most cases are introduced to the stock market through IPO, which, of late, have performed very badly. As a result the recent primary and secondary public share offerings have performed poorly, because retail investors have kept off the public offer (Deloitte, 2005). Again in Kenya, the demand from individuals has been affected by the poor performance of many listed companies and the disposal of shares by many households to meet pressing financial obligations (e.g. paying school fees). Many individual investors in Kenya took loans from banks to purchase shares but have been forced to sell as dividends dried up and share prices plunged. Many are still struggling to meet interest obligations on their bank debts (WB, 2002).

To represent and examine the possible factors affecting investors in selecting equity shares requires some theoretical platform. Merikas et al. (2011) investigated 26 factors influencing individual investor's behavior in the Greek Stock Exchange using varimax algorithm of orthogonal rotation of factor analysis. The results of their study over 150 respondents revealed that investors mostly consider "expected corporate earnings", "condition of financial statements", and "firm status in the industry". On the other hand the factors which are mostly ignored by investors in buying a share are "political party affiliation", "statement from politicians and governments", and "friend and coworker recommendations".

Rashid and Nishat (2009) conducted a study over 300 retail investors of 25 brokerage houses registered with the Dhaka Stock Exchange (DSE) in Bangladesh using factor analysis and regression analysis to explore the components of market structure that can make investors satisfaction. In their study it was found that the most influencing factors considered by investors are "efficiency of the company", "inflation rate", "easy and quick transaction", "transaction cost", "access to the company and industry information", "quality of information", and "prior knowledge of securities". In their study four principal factors namely "investment analysis", "ease of transaction", "information management", and "risk management" have been extracted from 38 influential factors/variables.

Chong and Lai (2011) examined the factors influencing equity selection process and how these factors are related to return using a sample size of 199 in Malaysia. The findings of the study showed that Malaysian customers placed much emphasis on "neutral information" which is formed by the strong contribution of "past performance of firm's stock", "recent price movements", and "firm status in industry". Other important principal factors are "accounting information", "social relevance", and "advocate recommendations". Moreover, in their study it was found that social relevant factor was found to be significant difference between different age groups of the respondents.

Joshi et al. (2011) attempted to examine the factors affecting investors' behavior. They found that investors in the city of Ahmadabad and Khambhat (Gujrat) are mostly influenced by the factors likely "financial performance of the company", "long term performance of the stock", "sentiment for the stock market", "expected results of the company (cash dividend, bonus share, buy back of share)", "reputation of firm", "movement of the stock market", and "affordability of share price". On the other hand investors are less

influenced by the factors like “coverage in print media”, “company’s ratio analysis”, “corporate social responsibility of the company”, and “traded in multiple stock exchanges”.

Bennet et al. (2011) investigated investors’ perception of the various factors that influence the equity selection decision. In their study 400 retail investors, who were living in Tamil Nadu in India, were given structured questionnaires. Their findings revealed that retail investors in India are giving much emphasis on return on equity, quality of management, return on investment, and price to earnings ratio in making stock selection decision.

Moreover, they examined whether investors’ demographic factors like gender, age, marital status, educational level, and income level have significant influence on investors’ equity selection decisions. The findings of their study also revealed that some factors considering important in selecting equity shares are significantly different between male and female investors.

A review of literature indicates that factors hinder individual investors to invest on equity traded in stock markets vary not only according to demographic features of individual investors but also empirical researches conducted in different areas at different time periods. Such studies have contributed significantly to the literature on equity investment decision but their findings may not be useful in Tanzania on account of different cultural, political, and economic arrangements. Therefore, this study provides applicable guidelines for one who wants to have insight into the topic and further evidence of equity investment decisions relating to developing country.

### **III. Methodology of the Study**

#### **3.1 Research instruments:**

A structured questionnaire was prepared based on literature review and objectives of the study for use in the survey. The questions were organized into two sections as follows:

To obtain personal background of the respondents, the first section of the questionnaire asked information regarding their general information such as gender, age, level of education, occupation, monthly income, which are considered as independent variables in this study.

The second section of the questionnaire asked respondents in relation to the concept of the study to rate the relative factors hinder individual investors to invest on securities traded in stock market, which are taken into account as dependent variables in this study. They were adapted from the relevant literature, personal experience, and interviews with investors and local brokerage house officials.

#### **3.2 Sample and data collection:**

The study used survey strategy in data collection in an exploratory setting.

The study was conducted in Dar es Salaam a center for the stock market trading activities, consists of individuals with various cultures and of various income and standard of living, but with great potential of investing. Also most of brokers, CMSA and the DSE are all located in the city. Data was collected from individual or private investors (non-institutional investors) constituting both existing and non-existing investors. Both probability and non-probability sampling method was applied in selecting the sample, whereby a combination of cluster and quota sampling methods were employed. A total of 71 individuals were involved in the study. 10 were officials, 26 were individuals who have already invested in equities and 35 were individuals who have not invested in equities.

### 3.3 Data Analyses Procedures and Hypotheses

Data collected from the research were analyzed qualitatively and quantitatively by using a Statistical Package for Social Sciences (SPSS). Data from the questionnaires were coded and subjected to computer to determine cross tabulations, frequencies, percentages of responses, correlation coefficients and chi-square. The interpretation of the results was done with the help of statistical measurements that was generated using computer. To better understand the factors affecting the selection of equity shares, the following null hypotheses have been tested for one of each principal factor.

H<sub>1</sub>: Lack of enough information (principal factor) about securities investment does not hinder individuals to invest in stock market securities.

H<sub>2</sub>: Lack of confidence (principal factor) on the listed companies does not hinder individuals to invest in stock market securities.

H<sub>3</sub>: Individuals do not prefer to invest mostly in other investment avenues (principal factor) than in the stock market securities.

## IV. Results and Discussion

### 4.1 Respondents' distribution by Age and investment in stock market securities

Table 1 shows percentage analysis of demographic attributes by age, out of the 71 individual investors who responded to the study. According to the findings of this analysis it is found that the majority proportion of total individuals who have invested in stock market securities are within the age range of 35years and 44 years (38.7%)

The minorities fall between the age of 55 years and 64 years. This can be explained by the fact that, the majorities are middle aged, energetic and employed and they can bear risks associated with investment. The minorities who are above the middle aged are of age of retirement and were not likely to be ready to take risks in any form, as they would be depending on their pensions as sources of income, while individuals below the middle aged some have been employed and they are still stabilizing themselves economically.

Table 1 summarizes the results;

**Table 1: Age and investment in stock market securities**

Age in range (Years)	Investing in stock market securities				Total
	Yes		No		
	Frequency	Percentage	Frequency	Percentage	
25-34	11	50.0	11	50.0	22
35-44	12	38.7	19	61.3	31
45-54	5	33.3	10	66.7	15
55-64	0	0	3	100	3
Total	28	39.4	43	60.6	71

Source: Survey data, 2014

### 4.2 Respondents distribution by Gender

Table 2 shows percentage analysis of demographic attributes by gender, out of the 71 individual investors who responded to the study. According to the findings of this analysis it is found that the majority proportion of total individuals who have invested in stock market securities out of 63.4 percent of male respondents, 37.8

percent have invested in stock market securities while out of the 36.6 percent of female respondents 42.3 percent have invested in stock market securities. This can be attributed by the fact that, females are more entrepreneurial in nature than their male counterparts and they are ready to take risk to diversify their investment portfolios. Therefore, from the analysis results it was observed that gender has minimal impact as a determinant factor and that the issue of not to invest in the stock market securities is attributed more by other factors.

Table 2 summarizes the results.

**Table 2: Gender and investment in stock market securities**

Gender	Investing in stock market securities				Total
	Yes		No		
	Frequency	Percentage	Frequency	Percentage	
Male	17	37.8	28	62.2	45
Female	11	42.3	15	57.7	26
Total	28	39.4	43	60.6	71

Source: Survey data, 2014

#### 4.3 Respondents distribution by Education level

Table 3 shows percentage analysis of demographic attributes by education level, it is observed that majority about 55.3 percent of the respondents have university degrees and among them, 44.7 percent have invested in stock market securities while the remaining 55.3 have not. And as a percentage total, 60.6 percent have not invested in stock market securities, while 39.4 percent have. The results imply that even those who have acquired higher education level did not invest in stock market securities because of reasons like low income, lack of awareness. However, it was observed that individuals with secondary education did not invest in securities and also those with college education were few comparing with those having university education. Though formal education is not a guarantee for a person to invest in stock market securities, but it contributes greatly in making a person aware of the benefits of securities investment and other surrounding investment environment. Thus, formal education is not the sole factor influencing individuals on their decisions to invest in stock market securities.

Table 3 summarizes the results.

**Table 3: Education level and investment in stock market securities**

Education level	Investing in stock market securities				Total
	Yes		No		
	Frequency	Percentage	Frequency	Percentage	
University level	21	44.7	26	55.3	47
College level	7	36.8	12	63.2	19
Secondary level	0	0	5	100	5
Total	28	39.4	43	60.6	71

Source: Survey data, 2014

#### 4.4 Respondents distribution by Occupation

Table 3 shows percentage analysis of demographic attributes by occupation level, from the analysis, it was found out that 45.1 percent of the employed respondents have invested in stock market securities while the remaining 54.9 percent have not. Again only 25 percent of the self-employed individuals have invested in stock market securities while 75 percent have not. It was observed that occupation of individuals do not have

influence on individuals' decisions to invest in the DSE. However, this depends on the type of job and individual does and in what organization. For example, for a case of individual who works with the CMSA must be exposed to issues concerning securities and is likely to invest in them but again is not a guarantee.

Table 4 summarizes the results.

**Table 4: Occupation and investment in stock market securities**

Occupation	Investing in stock market securities				Total
	Yes		No		
	Frequency	Percentage	Frequency	Percentage	
Employed	23	45.1	28	54.9	51
Self employed	5	25.0	15	75.0	20
Total	28	39.4	43	60.6	71

Source: Survey data, 2014

#### 4.5 Factors influencing individuals to invest in stock market securities

Several factors have been identified hindering individuals to invest in the stock market securities. In examining the factors that influence individuals to invest in stock market securities, respondents were asked to give their views on the issue. Questions were imposed to solicit their responses in relation to the hindrance factors. Data from the field were subjected into various tests to prove their significance effects and the association among them. Among the factors are low incomes of individuals, poor publicity, lack of enough information about the stock market investment, few listed companies' securities, alternative investment avenues and lack of confidence on the listed companies.

##### 4.5.1 Poor publicity

During the study poor publicity was identified as being one of the hindrance factors to individuals to invest in stock market securities. Majority of the respondents identified poor publicity as a major problem confronting the stock exchange. Table 5 illustrates the results.

**Table 5: Poor publicity and investment in stock market securities**

Investment in stock market securities	Poor publicity				Total
	Strong agree		Strong disagree		
	Frequency	Percentage	Frequency	Percentage	
Strong agree	24	85.7	4	14.3	28
Strong disagree	24	55.8	19	44.2	43
Total	48	67.6	23	32.4	71

Source: Survey data, 2014

It was observed that, 67.6 percent of the responses pointed out that poor publicity is one among the hindering factor to individuals to invest in stock market securities, while the remaining 32.4 percent did not see it as a hindrance rather other factors. Again, majority of the respondents seemed to be aware of the securities traded at the DSE but they did not know the advantages of investing in securities, which impede them to invest in securities.



#### 4.5.2 Few listed companies

This is another factor that was identified as being a hindrance to individuals to invest in stock market securities. It concern with the number of companies' securities available as alternative choice in the stock market. Table 6 summarizes the results.

**Table 6: Few listed companies and investment in stock market securities**

Investment in stock market securities	Few listed companies				Total
	Strong agree		Strong disagree		
	Frequency	Percentage	Frequency	Percentage	
Strong agree	22	78.6	6	21.4	28
Strong disagree	20	46.5	23	53.5	43
Total	42	59.2	29	40.8	71

**Source: Survey data, 2014**

From the table above it shows that a total of 59.2 percent of individuals respond noted that few listed companies being a problem and that it hinders individuals to invest. This is so as individuals would appreciate an investment with diversified portfolios so as to minimize associated risks. And the remaining 40.8 percent did not see the factor as a crucial factor that influences individuals. This indicates that there is still a need to increase number of financial instruments traded at the DSE so that individuals will be assured that their investments are safe and that the risks are minimal.

#### 4.5.3 Poor disclosure of information on the stock market securities

The objective of this variable was to find out whether disclosures of information have influence to individuals on their investment decision on stock market securities. Information is an important aspect since it enables individuals to get more knowledge and become aware of the activities that are taking place within their environment. Likewise, for people to invest in the DSE they need to have adequate and reliable information concerning the operations of the stock market together with information concerning the respective listed companies so as to enable them to make a wise decision in their case. Table 7 summarizes the results.

**Table 7: Poor disclosure of information and investment in stock market securities**

Investment in stock market securities	Poor disclosure of information				Total
	Strong agree		Strong disagree		
	Frequency	Percentage	Frequency	Percentage	
Strong agree	13	46.4	15	53.6	28
Strong disagree	32	74.4	11	25.6	43
Total	45	63.4	26	40.8	71

**Source: Survey data, 2014**

It was observed that 63.4 percent of the respondents identified disclosure of information as an important factor that may influence individuals on their decisions to invest in stock market securities. The remaining 40.8 percent did not observe it as an important factor. This implies that individuals lack adequate information, which they can rely upon. Even though the information may be available but for most individuals it is difficult to

understand and is not sufficient enough for them to make decisions. Not only that, there is asymmetry of information that is provided and that only few individuals, who are knowledgeable enough or exposed to securities investment aspects, can incorporate them in their investment decisions.

#### 4.5.4 Low public confidence in the listed companies' securities

This was another factor that was observed as a hindrance to individuals to invest in stock market securities. The objective of this variable was to test whether lack of public confidence in the listed companies' securities hinders individuals to invest in the stock market securities. Both who had invested and those who had not saw that it is an aspect for the government to look on, as it possesses a threat to investors especially on the aspect of risks. Table 8 summarizes the results of the analysis.

**Table 8: Low public confidence in the listed companies' securities and investment in stock market securities**

Investment in stock market securities	Low public confidence in the listed companies' securities				Total
	Strong agree		Strong disagree		
	Frequency	Percentage	Frequency	Percentage	
Strong agree	13	46.4	15	53.6	28
Strong disagree	33	76.7	10	23.3	43
Total	46	64.8	25	35.2	71

Source: Survey data, 2014

A detailed analysis revealed that, 64.8 percent of the respondents noted this variable as among the hindrance of individuals to invest in stock market securities. Individuals are more motivated to invest in avenues where they are sure the risk is minimal and in areas where they know better. For a rational investor he or she will try to minimize risk so as to maximize returns.

#### 4.5.5 Alternative investment avenues

The objective of this variable was to test the influence of alternative investment avenues towards individuals' decisions to invest in stock market securities at the DSE. In examining this variable individuals were asked to give their views on their preference concerning investment. Table 9 summarizes the results.

**Table 9: Alternative investment avenues and investment in stock market securities**

Investment in stock market securities	Alternative investment avenues				Total
	Strong agree		Strong disagree		
	Frequency	Percentage	Frequency	Percentage	
Strong agree	18	64.3	10	35.7	28
Strong disagree	38	88.4	5	11.6	43
Total	56	78.9	25	21.1	71

Source: Survey data, 2014

From the analysis it showed that, majority of the respondents about 78.9 percent preferred to invest in other investment avenues other than in stock market securities although some had invested also in stock market

securities. The alternative avenues were like businesses, agricultural activities, real estates, fixed deposits and SACCOs.

#### 4.6 Hypothesis Testing (Factor analysis)

Having already presented the descriptive analysis of the results, this part deals with testing the hypotheses that were developed as being the basis of the study. The results of factor analysis of 3 interval scaled variables influencing investors in choosing equity shares are shown in table 5, 6 and 7 with an objective to reduce these variables into lower number of manageable variables (principal factors) where each of the principal factors has to be formed by some common dimensional variables.

Hypotheses testing were done using a non-parametric statistics technique of chi-square together with correlation analysis.

##### Hypothesis One

The objective of this hypothesis was to test whether lack of enough information about securities investment hinders individuals to invest at DSE.

***“Lack of enough information about securities investment does not hinder individuals to invest in stock market securities”***

Correlation analyses and chi- square test were used in testing the variables in order to establish whether there exists a significant relationship between lack of enough information about securities investment and hindrance to individuals to invest. The Pearson Chi-square test of the cross-tabulated data was conducted between the two variables, together with respective correlation coefficient analysis results. Table 10 summarizes the results.

**Table 10: Chi –square test and correlation results indicating frequency distribution of respondents in lack of information about stock market securities**

Hindering factor	Chi-square value	Asymp.Sig (2-sided)	Correlation coefficient	Decision
Lack of enough information about stock market securities	4.583	0.032*	-0.892**	Reject H <sub>0</sub>

\*Significant at  $p < 0.05$

\*\*Correlation is significant at the 0.01 level (2-tailed)

##### Source: Survey data , 2014

From table 10, it shows that, lack of enough information about stock market securities significantly hinders individuals from participating in the securities investment. Hence the null hypothesis is rejected and the alternative hypothesis is accepted at 0.01 significant level and the correlation coefficient supports the results showing that the two variables are perfectly negative correlated. The factor significantly hinders individuals at  $p < 0.05$  which is 0.032. Also from the correlation coefficient it shows that, the hindering factor is negatively correlated to investing in stock market securities. Meaning that investment in stock market securities is negatively related to lack of enough information about stock market securities.

This implies that information is not enough, which makes majority not to become aware about the stock exchange. The study revealed that there is a general lack of awareness and familiarity with capital markets

amongst potential retail investors. This is largely because the whole concept of security investment is new and that the capital market securities and DSE has not successfully provided adequate information on issues of securities investment. Due to this problem, the capital market in Tanzania is faced with the issue of low liquidity because of the few participants. It is worth noting that poor disclosure of information to the public rendered potential investors unable to access the likely value of shares of investments in the stock markets, especially the return and future price of shares.

### Hypothesis Two

The objective of this hypothesis was to test whether confidence of individuals towards the listed companies' securities has an influence to individuals on their decisions to invest in stock market securities.

***“Lack of confidence in the listed companies’ securities does not hinder individuals to invest in stock market securities”***

In testing the hypothesis questions was imposed to request respondents to give out their perceived hindrance factor to securities investment at DSE. Correlation analysis was used to test the relationship between the variables together with Pearson chi-square test of the cross-tabulated data in order to establish whether there exists a significant association between the variables. Table 11 summarizes the results.

**Table 11: Chi-square test and correlation results indicating frequency distribution of respondents in lack of confidence in the listed companies’ securities**

Hindering factor	Chi-square value	Asymp.Sig (2-sided)	Correlation coefficient	Decision
Lack of confidence in the listed companies’ securities	5.567	0.018*	-0.896**	Reject H <sub>0</sub>

\*Significant at p<0.05

\*\*Correlation is significant at 0.01 levels (2-tailed)

**Source: Survey data, 2014**

From table 11, it is observed that the significance level is 0.018, which is less than the critical value of 0.05. This indicates that lack of confidence in the listed companies’ securities has a significant association with individuals’ decision towards stock market securities investment. This means that lack of confidence on the listed companies’ securities hinders individuals to invest in the DSE. Again the correlation coefficient is significant at 0.01 with value of negative 0.896. This shows that the variables are negatively related to one another.

From the analysis it showed that individuals especially those who did not invest in stock market securities lack confidence on the listed companies’ securities. This situation has been accelerated by the inadequacy of information that is being disclosed to the public making them insecure to invest at the DSE for fear of risks and loss of their money. This was evidenced by lack of transparency and the poor performance of Tanzania Oxygen Limited (TOL). On the transparency it was identified that there is a lot of window dressing of the information that is being released by the respective companies and that the quality of management teams in terms of competence and integrity is questionable. This is evidenced by the performance of TOL that has reduced public

interest and trust towards investment in securities at the DSE. Majority are disappointed since the company was the first to issue its shares to the public and still its performance is bad and that it has never given out dividends.

### Hypothesis Three

One among the objectives of the study was to find out the preference of individuals in their investment decisions. The objective of this hypothesis was to establish a significant association between the alternative investment avenues and investment in the stock market securities at the DSE. Specifically, it aimed at testing whether of other individuals prefer investments like businesses, real estates, fixed accounts, SACCOs to stock market securities particularly equities traded at the DSE.

***“Individuals do not prefer to invest mostly in other investment avenues than in the stock market securities”***

In testing the hypothesis Pearson chi-square of the cross tabulated data together with the correlation analysis were used. Table 12 below summarizes the results.

**Table 12: Chi-square test and correlation results indicating frequency distribution of respondents in alternative investment avenues**

Hindering factor	Chi-square value	Asymp.Sig (2-sided)	Correlation coefficient	Decision
Alternative investment avenues	4.547	0.033*	-0.288*	Reject H <sub>0</sub>

\*Significant at p<0.05

\*Correlation is significant at 0.05 levels (2-tailed)

**Source: Survey data, 2014**

From the finding summarized above, it was found out that the chi-square significance value is 0.033, which is less than the critical value of 0.05. Meaning that there is significance in the association between the two variables and that the null hypothesis is to be rejected at that level. Again from the correlation coefficient results it is significant at 5% level of significance with a value of 0.288. Then, alternative investment avenues is negatively correlated to investing in stock market securities and that individuals prefer to invest more in alternative investment avenues to stock market securities.

From the analysis it was observed that individuals preferred to invest more in other investment avenues especially the tangible ones like business ventures, agricultural activities, and real estates. They viewed these as areas where they have control of and easy to manage themselves. Individuals were not sure of their fate when investing at the DSE especially with it newness in our country and rather they would feel safe in places where they are accustomed to. This is evidenced from the results that even those who have invested in stock market securities have engaged themselves in other investment avenues. The implication means that they even do not trust much the securities and that to avoid risk they should diversify their portfolios.

## V. Conclusion

Factors' affecting individual investors to invest Dar es Salaam Stock Exchange (DSE) was studied in the present study through examining key demographic factors together with the test of hypothesis principal factors using chi square test and Correlation coefficient test. Findings of the study reveal that, the depth of the stock market is low leaving investors with limited choice in their investment process, lack of enough information about securities, alternative investment avenue, low, poor publicity, few listed companies are major factors hinder investors to invest in stock market securities. Respondents also show that, lack of confidence, in the listed companies being one among other factors affecting investors in equity investment decision at DSE. Findings also indicate that respondents having different demographic attributes are acting the same and invariably in giving importance in factors affecting equity investment decision at stock market. Respondents are giving significantly different degree of importance of factors affecting equity investment decision with regard to their age, occupation, gender and their level of education.

On the ending note, it is worthwhile to mention that this research contributes to existing field of literature in two ways.

First, the study used sample in Dar es Salaam City in Tanzania, which have not been given enough attention in the literature, Second, this research can be used to draw a relative comparison of the factors effecting individual investors in equity investment decision with other studies be conducted in different regions of Tanzania. Nonetheless, overall results can be improved by including new variables and observations, finally the reliability of the findings of the study can be investigated by conducting similar research in other developed countries.

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## **Technological Innovations for Indonesian SMEs in AEC Era**

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### **Abstract**

Even though business experts often state Indonesian SMEs should create innovations in facing the ASEAN Economic Community (AEC) in 2015, the experts do not reveal the kind of innovation should be applied. The paper proposes technological innovation to enhance the SMEs performance. The study then delineates how technological innovation can be used effectively by the SMEs in order to achieve the competitive advantage position. Theoretical and practical implications in the use of technological innovation in Indonesian SMEs are discussed.

**Keywords:** SME, AEC, technological innovation, competitive advantage



# Manager's Resilience Role in Innovative Behavior

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## Abstract

The purpose of this paper is to examine a causal relationship model between resilience and innovative behaviour. Using the new measure of resilience, survey was administered to 241 participants from six industries in Indonesia. The relationship model between resilience and innovative behaviour was examined using Confirmatory Factor Analysis(CFA) with two-step structural equation modelling. Association to several measures related was also examined.

Factor analysis confirmed that measure of innovative behavior is better treated as multidimensional – comprising idea generation, idea promotion and idea implementation rather than uni-dimensional.

The causal relationships between the dimensions of resilience and the dimensions of innovative behavior were positive, as hypothesized. Four paths had moderately large and statistically significant coefficients: from developmental persistency to idea implementation and idea promotion, and from positive emotion to idea promotion and idea generation. Two paths had low and insignificant coefficients: from developmental persistency to idea generation and from positive emotion to idea implementation.

These findings extend organizational behavior and individual innovation research by suggesting that organizations can become more innovative by developing employees' resilience. Managers and organizations will benefit from understanding the potential strategies and interventions to improve employee's resilience as well as innovative behaviour by increasing developmental persistency and positive emotion. Future extensions of these results might involve studying variables from the entrepreneurship literature hypothesized to mediate or moderate the effect of resilience on innovative behavior.

**Keywords:** resilience, innovative behavior

## **Economic Inequality and Organization Management: Lessons from Thailand**

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### **Abstract**

This project examines how, why, to what extent and with what effect country-level economic inequality - specifically social and economic impoverishment – affects the management of the multinational corporate subsidiary. An exploratory, multi-case study was employed using data drawn from interviews, observation and company information. Findings outline the manifestations of social and economic impoverishment at the Thai-based organization, the organizational costs incurred, and the counter-measures management seeks to employ. Implications for theory and practice are discussed.

**Keywords:** economic inequality, front-line workers, the multinational subsidiary, Thailand

# Developing a Software Application based on Data Mining Technique to the Market Basket Analysis

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## **Abstract**

The purpose of this research was to develop a software application for a market basket analysis system based on a data mining technique. The objective of this software application is to generate relationships of product items in any Thai Grocery shops to be employed as a decision support tool for vendors' decision-making process to provide appropriate promotions to their customers. Moreover, the software application can help the vendors to arrange and place the products that have a relationship close to each other. Therefore, with the software, it will offer better product campaigns following trends of customer requirements leading to increase product sales. The developed software application was evaluated by comparing with a well-known software application in the market basket analysis system. Furthermore, UCI data sets were used as a benchmark data set. Experimental results showed that the proposed developed software application based on data mining technique can provide the performance similar to the well-known software effectively.

**Keywords:** Market Basket Analysis, Data Mining, Software Application.

## ***Baitul Maal wat Tamwil* for Microfinancing Small and Medium Businesses to Go Global**

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### **Abstract**

This paper aims to analyze the function of *Baitul Maal wat Tamwil* (BMT) to microfinance Small and Medium Businesses in the global era. *Baitul Maal wat Tamwil* is microfinance institution that applied Islamic law in its operating system with no riba (usury) and uses profit and loss sharing instead. One of the most special characteristic about BMT is that it has big potential for helping financial inclusion in rural areas and for microfinancing Small and Medium Businesses. In the era of smart technology, handmade and traditional products became more rare and more expensive. Such products are only available by the expert's hands in rural areas, but such people usually have issues with financial inclusion. People living in rural areas do not know much about financial institutions; they are even afraid of those, and end up with high interest rates from non-institutional moneylenders. Consequently, those people face a serious problem for starting up and expanding their business. Such problem can be solved by the practices of BMT, in which it shares both profit and loss from the business operations. BMT also comes in the form of cooperatives that is more commonly known and does not requires human capital (education, money, skill, etc) to be able to participate in it. BMT does not use interest but profit-loss sharing system; therefore, BMT becomes more responsible and engaged to help the businesses achieve their goals. The research is done based on journals and literatures about the differences between BMT and other finance institutions, the role of BMT to microfinance small and medium businesses and promote financial inclusions, and study case of BMT in developing countries such as Indonesia. The findings showed how BMT has more potentials over the other finance institutions and plays important role to help small and medium enterprises expand their businesses in the global era.

**Keywords:** Microfinancing, *Baitul Maal wat Tamwil* (BMT), Small and Medium Businesses (SMB), Islamic Financial Institutions

# The Impact of Financial Risks and Resources on Export Intention: Evidence among SMEs in an Emerging Economy

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## Abstract

One of the major considerations for pursuing export move is the financial standing of a firm, together with other determinants. Traditional view holds that export decisions is the result of a trade-off between available resources and potential risks. It has been debated that the resources must surpass the risks in order to materialize export efforts. Despite this pertinent argument, many studies have only examined the financial factors either as stimulus or barriers factors, yet the findings on the combination of the effects is still lacking. Thus, the purpose of this study is to examine the impact of both financial resources and risks on export intention of local firms. Specifically, the model integrates three variables: internal financial resources, external financial constraint and perceived export costs, while controlling on firm and product effects. Evidently, these variables are pertinent in examining the export intention, and they have been used as verified measurements in prior works. In the context of small and medium-sized enterprises (SMEs), the analysis is done at the managerial level but interpreted as the firm's behaviour because the owner normally acts as a sole decision-maker. This study focused on an emerging economy because previous studies suggested that financial factors is more dominant in developing countries than advanced economies due to lack of financial supports. Survey data was collected from 142 firms in Malaysia, while complementary data was retrieved from the SME Corporation Malaysia database. Through OLS regression, the results show that firms with more internal financial resources, fewer external financial constraint and perceived lower costs have higher intention to become exporters. However, perceived export costs show insignificant moderating effect between internal/external financing and export intention, as predicted. Also, two control variables are significant related with export intention: product competitiveness and size. This study contributes to the literature by integrating push and pull financial factors for comprehensively understanding the impact on internationalization process of firms. As for other parties: entrepreneurs and policy-makers, appropriate measures should be taken to address the issue in practice.

**Keywords:** Financial risks. Financial resources. Export intention. Internal financial resources. External financial constraint. Perceived costs. SMEs. Emerging economies

# The Effect of Service Quality on Customer Satisfaction: A Study in JNE Courier Services in Indonesia

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## Abstract

The purpose of this study is to apply Hierarchical Service Quality Model (HSQM) to courier services context and to investigate the relationship between service quality and customer satisfaction. The HSQM consists of three sub-dimensions; interaction quality, physical environment quality, and outcome quality. Three hypotheses are to be submitted to empirical tests. The data for empirically testing the proposed hypotheses were collected from samples of 100 customers of JNE courier services. The hypotheses were tested using multiple linear regression. The results suggest that the significance effect to customer satisfaction differs within various service quality sub-dimensions, with only two sub-dimensions have significant effect to customer satisfaction. From the firms perspective, the HSQM is useful for assessing service quality which related to their performance. It allows firms to recognize problems and make an improving strategy to deliver interaction quality, physical environment quality, and outcome quality to customers.

**Keywords:** service quality, HSQM, customer satisfaction, JNE, courier services

## I. Introduction

JNE is a well known express and logistic courier services company from Indonesia. The company was first established on November 26, 1990 under the name of PT Tiki Jalur Nugraha Ekakurir (JNE) by Soeprapto Suparno. In the early establishment, the company was founded as a pioneering one of the divisions of PT Citra Van Titipan Kilat (Tiki). Tiki itself is an international shipping company. JNE is one of the Indonesia's leading courier and logistic company with a vast distribution network. Some units of the activities carried out by the JNE is the business of customs, import of goods, documents and delivery. JNE also serve affairs delivery of goods and documents from abroad to enter Indonesia, but JNE is focusing to provide a delivery service for package and document to every destination in Indonesia. To date, JNE has over than 50 offices and CSL (Critical Stock Location) and also 1.500 dropping points all over Indonesia (source: [www.jne.indonesianlogistic.eu](http://www.jne.indonesianlogistic.eu)).

The tardiness of the shipping or courier service has become the most problem that customers had complain about JNE services. After they choose particular domestic service type that has certain delivery time, but that thing sometimes did not happen as JNE promises. Many customers gather in online forum and share about their dissatisfaction towards JNE services had been discuss about the bad quality of JNE courier services and also the frontline employee service, which did not help much when customers came to outlet. This problem describes that in some case, JNE services did not meet customer expectation. Otherwise, the managing director of JNE,

Johari Zein said that JNE trained their employee to have core competence to be honest, integrity & reliable and customer oriented. We can see incongruency from what company propose their service quality to what consumer perceived the service quality.

The purpose of this study is to identify the effect of service quality using Hierarchical Service Quality Model (Brady & Cronin, 2001) to customer satisfaction on JNE courier services. HSQM model consists of three dimensions; Interaction Quality, Physical Environment Quality and Outcome Quality. Brady and Cronin reported on their model development efforts using a combined industry sample and generalized the results (Pollack, 2009). Pollack (2009) empirically tested HSQM model in two kind of service delivery, people-based service (hairdresser services) and equipment-based service (local phone service subscribers), to distinguished the difference effect of service quality in two service type. Our research want to test in service delivery type which based in between of people-based service and equipment-based service. Typically, an equipment-based service involves a low level of customer contact and a people-based service involves a higher customer contact level (Chase, 1978 as cited by Pollack, 2009). Courier services usually does not involve person-to-person interaction, but this service can be customized in a customer service delivery setting. We propose that courier service is not include in either high customer contact services or low customer contact services, but in between of those two kind of service which can be called as medium customer contact services.

In this study, we develop a theoretically based model of perceived service quality and customer satisfaction. The process of conducting a quantitative study begins from selecting a topic or find the problem statement, then addressing research questions and find the appropriate literature review that related to the topic. We briefly review the literature regarding the relationship between the two key concepts, perceived service quality and customer satisfaction. After the research is all set, the data has to be collected using some tools, in this case is questionnaire. The data that obtained from questionnaire will be analyzed to answer the hypothesis of the perceived service quality to customer satisfaction. The population of this research is all the customers of JNE. For collecting data, we send the questionnaire to the samples of the customers in Bandung, especially to ITB student. Data will be analyzed using multiple linear regression. When the analysis done, result and conclusion occurs to answer to research questions.

## II. Conceptual Framework

### Service Quality

Service quality can be defined as “the delivery of excellent or superior service relative to customer expectations” (Zeithaml and Bitner, 1996). Before Brady and Cronin proposed the hierarchical service quality model (HSQM) in 2001, there were two main thoughts of service quality. On the one hand, Grönroos (1984) proposed that consumers judge the quality of services on two broad aspects: technical quality (service outcome quality) and functional quality (service process quality). On the other hand, Parasuraman et al. (1988) proposed five service quality dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Brady and Cronin (2001) proposed HSQM to synthesize the previous conceptualizations. In HSQM, service quality is viewed as a multilevel construct. HSQM consists of three primary dimensions: interaction quality, physical environment quality, and outcome quality (Brady & Cronin, 2001). The interaction quality dimension is comprised of attitude, behavior, and expertise of the service provider. The physical environment quality

dimension is comprised of ambient conditions, design, and social factors. The outcome quality dimension is comprised of waiting time, tangibles, and valence.

### Customer Satisfaction

Oliver (1997) defines satisfaction as “the consumer’s fulfillment response.” Extant research conceptualizes customer satisfaction as a cumulative construct that is affected both by service expectations and performance perceptions in the current time period, as well as in prior time periods (Johnson et al., 1995). Customer satisfaction have a degree or level which can be measured by the level of products or services fulfill the customers’ expectation. The fulfillment of customer expectation can be seen from the quality of products or services. An increase in satisfaction occurs if performance or quality is higher than expectation, while a decrease in satisfaction results if performance or quality fails to meet expectation (Ha and Janda, 2008). Therefore, many researchers proposed that service quality is an antecedent of the broader concept of customer satisfaction (Pollack, 2009). To conclude, this research used Hierarchical Service Quality Model by employ three dimensions such as; interaction quality, physical environment quality and outcome quality, that will affect customer satisfaction in using JNE courier service as can be seen in Figure 1. Hence, for the more recently proposed HSQM measure, the following hypothesis is formulated:

H1. Interaction quality will positively affect customer satisfaction

H2. Physical environment quality will positively affect customer satisfaction

H3. Outcome quality will positively affect customer satisfaction

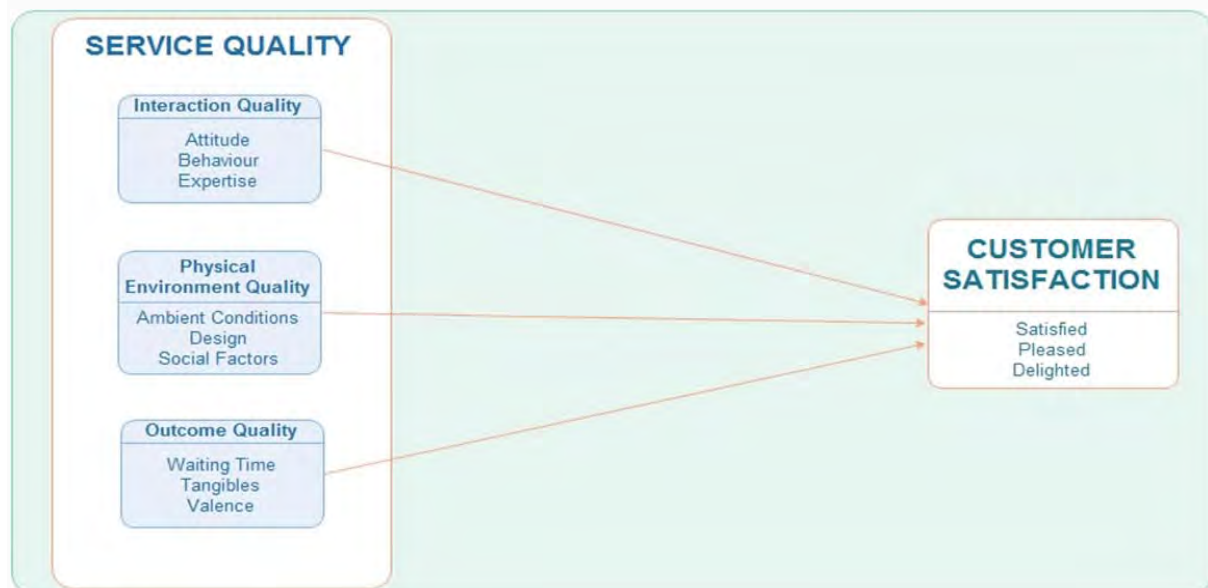


Figure 1. Conceptual Model

### III. Methodology

A sample of 100 students from ITB was surveyed. Respondents were asked to recall one of their recent experiences with JNE courier services and fill out a questionnaire based on that experience. Those who ever used JNE courier services are excluded. To answer the general question of what is the best predictor of customer



satisfaction using HSQM model which consist of three predictors; interaction quality, physical environment quality and outcome quality, we use multiple linear regression with SPSS 17.0 tools. Multiple linear regression employed to identify the predictors and also the relationship between predictors and dependent variable.

All measures used in this study were adapted from extant scales. All the service quality scale were based on Pollack (2009) and contained nine items, which is three items of interaction quality, three items of physical environment quality, and three items of outcome quality. The three items capturing customer satisfaction were based on Ha and Janda (2008). All constructs used a 4-point Likert scale with anchors of strongly disagree (1) to strongly agree (4). The wording of all scales was adapted to suit the JNE courier services. Cronbach’s alpha coefficients value that should be more than 0.60 and the result for this study is 0.90 that exhibiting good internal reliability.

#### IV. Result and Discussion

After 100 data from respondent has been gathered, we analyzed the data using Multiple Linear Regression tool. The result is shown on the Table 1, Table 2 and Table 3.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.803 <sup>a</sup>	.645	.604	.46181

a. Predictors: (Constant), X3, X1, X2

b. Dependent Variable: Y

**Table 1. Model Summary Result**

From the model summary table above, the predictors variables which consist of interaction quality, physical environment quality and outcome quality explained approximately 64.5 % of the variance in customer satisfaction.

**ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	10.055	3	3.352	15.715	.000 <sup>a</sup>
Residual	5.545	9	.213		
Total	15.600	12			

a. Predictors: (Constant), X3, X1, X2

b. Dependent Variable: Y

**Table 2. ANOVA Result**

The ANOVA table shows the probability or significance value from ANOVA equation which will be used as test for regression model fit. In this finding, the significant level are 0.000. Thus, the regression model can be used to predict customer satisfaction. That finding also shows that X variable, which is service quality, have significant impact on customer satisfaction as Y variable.

#### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.412	.407		1.012	.321
X1	.329	.179	.321	1.834	.048
X2	-.088	.201	-.084	-.436	.666
X3	.643	.267	.600	2.403	.024

a. Dependent Variable: Y

**Table 3. Coefficients Result**

The three hypothesis of HSQM were tested using multiple linear regression. The result is presented in Table 3. The result for the multiple regression analysis, there are only two independent variables, interaction quality (X1) and outcome quality (X3), that have significant value less than 0.05. Physical environment quality (X2) does not have significant value. From the B score, customer satisfaction is primarily predicted by lower level of physical environment quality (X2) and by higher levels of interaction quality (X1) and outcome quality (X3). The findings of this study suggest, however, not all three sub dimensions of service quality are important to JNE services that will affect to customer satisfaction. Also, the present study is confirmed H<sub>1</sub> and H<sub>3</sub>, but H<sub>2</sub> is rejected. From this study, we can conclude the regression equation for the service quality model as follows:

$$Y = 0,412 + 0,329 X_1 - 0,088 X_2 + 0,643 X_3$$

or in percentage

$$Y = 0,412 + 32,9\% X_1 - 8,8\% X_2 + 64,3\% X_3$$

Physical environment quality is theorized to be a function of ambient condition, design and social factors. The low level of this dimension might cause by the customer perception about the current condition of JNE's physical environment and they might not think this dimension is important for the courier service. Interaction quality has higher level than physical environment quality. This sub dimension is more important for customer. Interaction quality is theorized to be a function of attitude, behavior and expertise from JNE employee towards every customer that come to the outlet. This is a prove that JNE employee has been serving their customers quite well. Outcome quality that theorized to be a function of waiting time, tangibles and valence has the highest value. This sub dimension shows about the performance of the service that has been provided by JNE to customers. This outcome quality have a great impact on customer satisfaction in using service from JNE.

## V. Conclusion

The results of our study show that at a courier services categories, interaction quality, physical environment quality and outcome quality has a different impact on customer satisfaction. Based on our findings, interaction quality and outcome quality have a significant impact on satisfaction. Physical environment quality does not affect customer satisfaction significantly and have a negative relationship with customer satisfaction. Refer to Grönroos' (1984) two dimensions of service quality, which are the technical quality and functional quality, the three dimensions of service quality from Brady and Cronin (2001) are also only measure two dimensions. Physical environment quality and interaction quality can be refer to functional quality, while outcome quality can be refer to technical quality.

In equipment-based services, technical quality has stronger impact on satisfaction than functional quality, and in people-based services, functional quality is more influential than in equipment-based services (Pollack,

2009). Our study suggest that customers of JNE courier service feel the importance both of technical quality and functional quality to built customer satisfaction, even only one factor of functional quality, which is interaction quality, has significant and positive relationship with customer satisfaction. These findings were supported our assumption in the beginning of this study that courier services as one of the service delivery type which based in between of people-based services and equipment-based services. Pollack (2009) suggest that in low personal contact services, technical quality has a stronger impact on satisfaction than functional quality, and in high personal contact services, functional quality is more influential than in low personal contact services. Thus, our study also contribute to the research of medium personal contact services, which has differentiation with high personal contact and low personal contact, but not in contrast with both of them.

#### VI. Limitation

The first limitation of this study is that a student sample was used. Thus, the results can only be generalized to young people, but the small number of sample can reduced the generalizability to young people. The future research should be use much more sample and maybe have a cooperation with service provider to distribute the questionnaires, so it will help the researcher to gather the data directly from customer. The study of only one courier services company was our second limitation, which reduced the generalizability of our findings to other courier services. For the future research could use some courier service that run their business in Indonesia.

Interaction quality and outcome quality have a good result from customer point of view towards JNE service that affect to customer satisfaction. But, one dimension that has been perceived negative from customer, should become a big concern for JNE company to increase customer satisfaction on JNE service. By looking at dimension that build physical environment quality, such as ambient conditions, design and social factors, these thing has been perceived negative by customer. Company should pay attention at this physical environment quality with fixing their layout, design and infrastructure that could become competitive advantage for JNE.

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### VIII. Appendix

#### Operational Variable

Variable	Subvariable	Indicator	Measurement scale	Item
Service Quality	Interaction Quality	<ol style="list-style-type: none"> <li>1. <b>Attitude</b> <ul style="list-style-type: none"> <li>• Willingness to help</li> </ul> </li> <li>2. <b>Behaviour</b> <ul style="list-style-type: none"> <li>• Respond quickly to my needs</li> </ul> </li> <li>3. <b>Expertise</b> <ul style="list-style-type: none"> <li>• Understand their knowledge to meet my needs</li> </ul> </li> </ol>	Ordinal, by using Likert scale (4 scale)	1, 2, 3
	Physical Environment Quality	<ol style="list-style-type: none"> <li>4. <b>Ambient Conditions</b> <ul style="list-style-type: none"> <li>• Good atmosphere</li> </ul> </li> <li>5. <b>Design</b> <ul style="list-style-type: none"> <li>• Layout serves customer purposes</li> </ul> </li> <li>6. <b>Social Factors</b> <ul style="list-style-type: none"> <li>• Good impression of other customers</li> </ul> </li> </ol>	Ordinal, by using Likert scale (4 scale)	4, 5, 6
	Outcome Quality	<ol style="list-style-type: none"> <li>7. <b>Waiting Time</b> <ul style="list-style-type: none"> <li>• Company try to keep minimum waiting time</li> </ul> </li> <li>8. <b>Tangibles</b> <ul style="list-style-type: none"> <li>• Services customers are looking for</li> </ul> </li> <li>9. <b>Valence</b> <ul style="list-style-type: none"> <li>• Company try to give good experience</li> </ul> </li> </ol>	Ordinal, by using Likert scale (4 scale)	7, 8, 9
Customer Satisfaction		<ul style="list-style-type: none"> <li>• Satisfied</li> <li>• Pleased</li> <li>• Delighted</li> </ul>	Ordinal, by using Likert scale (4 scale)	10, 11, 12

# Entrepreneurial Careers among Non-Business Graduates: A Case Study at USIM

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## Abstract

Graduate entrepreneur and entrepreneurial graduates (graduates with entrepreneurial attributes) are two focal concerns of the Malaysian Government today. This is due to the increasing numbers of unemployed graduates because of lacking several skills such as survivability and risk-taking. A study conducted by Centre of Student Entrepreneurship Development at Universiti Sains Islam Malaysia (USIM) in collaboration with the Office of Alumni Management USIM seeks to investigate of why and how non-business graduates in USIM participate in entrepreneurship activities. Semi-structured interviews were conducted to 25 USIM alumni entrepreneurs. This paper highlights findings from five of the alumni entrepreneurs. Results from this study are expected to assist the university in intensifying efforts to encourage more students getting involved in entrepreneurship as their career after graduation although from the non-business educational background.

**Keywords:** graduate entrepreneur, entrepreneurship, graduate employability, non-business graduates

# **External Debt, Economic Growth and Poverty in Indonesia, 2004-2013**

Temporary Report

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## **Abstract**

External debt becomes hot issue both in the national budget and in the international partnership. Furthermore, it was related with economic growth and poverty reduction. This phenomenon was directed to learn and answer a research question: how do external debt, economic growth and poverty interact?. This research was focused on Soesilo Bambang Yudhoyono's regime (2004 – 2013). Research methods involve descriptive analysis, causality test, and correlation test.

Research results confirm that the growth of external debt tends to high in 2010 about 17%, the economic growth tends to high in 2011 about 6.5%, and the percentage of poverty tends to high in 2006 about 17.75%. The Granger's Causality Test shows that external debt and economic growth have not impact each other, external debt has impact to poverty in one direction at lags 2 with  $\alpha = 10\%$ , and economic growth and poverty have not impact each other. The correlation test shows that the external debt high correlate with poverty about 0.9. All of research finding will direct to prudential debt policy in Indonesia especially for poverty reduction agenda.

**Keywords:** external debt, economic growth, poverty, causality, correlation

# **Does a Rainforest Alliance Certified label matter? An Investigation on Its Influences on the Affective Responses and Recycling Behavior of Consumers**

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## **Abstract**

An experiment was conducted to test whether a Rainforest Alliance Certified (RAC) labeled coffee elicits favorable affective responses and further influences recycling behavior of university students in Taiwan. It is designed with two treatments, with and without a RAC label on the package of a soluble coffee product. Participants were surveyed about how they felt and how the coffee tasted and the paper cups they threw in a recycling bin or trash bin after the survey were recorded. The effects of RAC label are found to apply to female students in that their recycling behavior is increased.

**Keywords:** green consumerism, eco-label, semantic differential, recycling behavior

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## **I. Introduction**

The fact that coffee is the second most traded commodity implies the environmental, social, and economic effects of how it is grown could be considerable. Problems regarding the sustainability of the origin country of coffee give rise to the ethical labeled coffee such as fair-trade, organic, shade grown coffee. It is such a teachable commodity as those labels with different appeals provide choices and how it is produced and processed concerns varying social and environmental conditions of its places of origin (Kenworthy & Schaeffer, 2000; Lyon, 2006). Various coffee shops on the streets and the multiplicity of coffee products in supermarkets evidence the prevalence of coffee drinking in Taiwan in recent decades. The context lends support to advocating the inclusion of sustainability considerations in consumers' decision of coffee purchase.

Established in 1987, the Rainforest Alliance is an international nonprofit organization that works to conserve biodiversity and ensure sustainable livelihoods. Products bearing the Rainforest Alliance Certified (RAC) seal originate on--or contain ingredients sourced from--Rainforest Alliance Certified farms or forests.

These farms and forests are managed according to rigorous environmental, social and economic criteria designed to conserve wildlife; safeguard soils and waterways; protect workers, their families and local communities; and increase livelihoods in order to achieve true, long-term sustainability. Since there are coffee brands with RAC in the shelves, if consumers are given a taste trial, we are interested to see how they respond psychologically and whether these affective responses are linked to their self identity as well as pro-environmental behavior. However, as Loureiro & Lotade (2005) pointed out, very little is known about the consumer response toward these labels. Rahbar & Wahid (2011) also stress that recognizing the impact of eco-labels on consumers is a crucial issue.

To be specific, the present study aims to find the answers of such questions as:

- Is there any difference between the affective responses arisen by a package with a RAC seal and that without a RAC label?
- Do self identity and demographic factors play a role in explaining different affective responses?
- What is the relationship between the RAC label and the recycling behavior of consumers?

With an experiment designed to test the influence of the RAC label on the feelings and imagination of consumers, measured with semantic differential scale, findings of this study might be informative for strengthening one of the functions of green marketing as a tool that assists in educating consumers about how they can transform the society into a sustainable one through their everyday consumptions.

## II. Literature Review

In a supermarket or on a shopping website, what consumers see on the packages of products is inevitably considered when they make choices of purchase. Underwood (2003) discussed the communicative power of product packaging. It is argued that consumers' awareness and image of a brand is to some extent a function of their experience with product packaging. Color, typeface, and logos are able to connote symbolism for they often share a distinctive public meaning in a culture and produce emotions and associations that reinforce a brand's benefits and/or symbolism, which may include environmental consciousness. Harckham (1989) thought packaging would elicit feelings difficult to describe and sometimes idiosyncratic, relevant to the acceptance, desire, and use of the product. The influences of visual information of beverage package on consumers' flavor evaluation have been demonstrated (See Mizutani et al., 2012). Among these visual elements, color is important as sensory and hedonic expectations of a product can be sourced from color (Piqueras-Fiszman, Velasco, & Spence, 2012; Ares & Deliza, 2010; Marshall, Stuart, & Bell, 2006). In order to make a quick purchase decision, the color of the package or label is usually the basis on which consumers draw clues regarding a product's likely qualities (Piqueras-Fiszman et al., 2012).

In addition to visual hints, what makes consumers pay attention to eco-labels depends on psychological factors as well. Personal involvement is among the determinants proposed by Thøgersen (2000), who held reservations about the extent to which consumers involve with the information about environmental consequences in the form of a label and thought that they could fail to notice the labels particularly when other competing self-relevant information exists. More fundamentally, whether consumers pay attention to eco-labels in the first place might be a matter of environmental attitude or value of consumers (Ölander &



Thøgersen, 1995; Stern, Dietz, Abel, Guagnano, & Kalof, 1999).

Product labels provide information that partially forms a consumer's initial perception about a product and many consumers always read labels (D'Souza, Taghian, & Lamb, 2006). With respect to the environmental appeals of products, environmental labels or eco-labels provide timely and relevant information for the consumer (Hansen & Kull, 1994; Miljø- og Energiministeriet, 1995; Scammon & Mayer, 1993). Green consumers use them to reduce cognitive effort under time pressure in choosing a greener product (Young et al., 2010). A number of studies addressed the effects of these labels on the perceptions and purchase intentions of consumers. Grankvist, Dahlstrand, & Biel (2004) considered eco-labels could provide a signal and activate reflections about how food is produced and its influences on human and environment. The moderating effect of awareness of eco-label is found to be positive between knowledge of green product and consumer intention to purchase (Nik Abdul Rashid, 2009). Bauer, Heinrich, and Schäfer (2013) found that an organic label leads to an increase in brand perception of cereals and has a strong positive effect on purchase intention and consumer's willingness to pay. Nevertheless, there is disagreement as to the effectiveness of eco-labels in motivating consumer's response (Wessells et al., 1999).

Green product labels help position the product's image (D'Souza et al., 2006). For example, "yuppies" buy coffee with product labels with an attempt to access associations catering to their imagination. Yuille & Catchpole (1977) indicated that imagery involves representations of ideas, feelings, and memories and may be evoked through sensory stimuli including smell, taste, sight, or tactile sensations. Sensory perceptions of consumers engaging in imagery-processing are stimulated so that they concentrate on the possible outcomes and sensory experiences associated with the product (Underwood, 2003). Product trial, in the case of present study taste trial of RAC coffee, should facilitate this imagery-processing. Kempf & Smith (1998) divided the attributes of product trial into experiential and non-experiential ones. The former can be evaluated by trial and the latter are conveyed better through advertising claims or label information. They view trial experience as "a vivid, cogent, and salient learning environment with potentially powerful influences on brand evaluation and purchase."

### III. Method

An experiment in which university students received a trial taste of a RAC coffee was conducted in April 2015 to test the effects of RAC label on their perceptions about the coffee. A total of 186 participant students were approached at the convenience stores on their campuses to taste the coffee and fill a questionnaire with a picture of the coffee's package. They all tasted the same RAC coffee but about half of them were presented with a picture of package with a RAC label while the other half of them were presented with picture of package without a RAC label. The two fictitious packages are identical in background color, typeface, and size except one bears a RAC label and the other shows a name and logo of a hypothetical brand in place of a RAC label (Figure 1). The coffee tasted by students is an instant RAC coffee of a major coffee brand in Taiwan and prepared using standard amount of water and coffee powder. Every student tastes a standard volume of coffee of 20 ml in approximately 80°C filled in a disposable paper cup.



Figure 1 Two Fictitious Coffee Packages

The questionnaire uses a semantic differential scale with eight pairs of adjectives in a 7-point format to measure the feelings and imaginations of students who taste the coffee. The adjectives such as natural, ecological, environmental, and green are avoided in case that students' affective responses are biased by these adjectives in stead of being elicited by the packages. Alternatively, two blankets are provided to be filled by students with any adjective other than those in pairs comprising the semantic differential scale. Remaining parts of the questionnaire include six asking respondents to rate their tastes of the coffee, using a 5-point scale that is unipolar, which is common in sensory evaluation of food property (Schifferstein, 2009), one item for the prices respondents are willing to pay and one item for the frequencies in which respondents drink coffee.

Echoing the call for the observation of actual consumer behavior (D'Souza et al., 2007; 2006), this study employed a novel method by which the students' recycling behavior of the paper cups used for coffee taste trial was measured. The paper cup and questionnaire for each respondent are both unobtrusively marked in a same number such that where the cup is disposed, in a recycling bin or a trash bin, can be recorded after the taste trial. Research assistants also observed who disposed the cups and how in order to supplement the bin records with more behavioral information. This behavioral data is coded in two categories of "recycled" and "un-recycled."

Different data collected is analyzed with three statistical methods. Independent sample t-tests are used to analyze the differences of interval data in affective responses, tastes, and willingness to pay. The two-way ANOVA is conducted to detect the effects of RAC label, gender, and the interaction of RAC label and gender, with the willingness to pay as the dependent variable. Chi-square tests of homogeneity of proportions of students undertaking recycling behavior between experimental and control groups are also performed.

#### IV. Results and Discussion

##### Affective responses to coffee packages with/without a RAC label

Table 1 summarizes the results of independent sample t tests for the differences between packages with and without a RAC label regarding the affective responses, taste, and willingness to pay. An additional profile (Figure 2) showing the mean scores of each item of adjective pair provides a clearer view on the overall feelings of these students. One can see that the difference between two packages is small and both groups of students largely have feelings to the left. Only two feelings make statistically significant difference between packages with and without a RAC label and the result contradicts our expectation. The package with a RAC label gave

students a more bluer feeling than the package without a RAC label did. A possible explanation deals with the image of the frog and the text of “rainforest” in the RAC label, which could make students associate them with the density, darkness, and complexity of the rainforest. Relatively, students seeing the package without a RAC label had a more inspiring feeling than those seeing the package with a RAC label did. This is probably attributed to the fictitious brand name of “GOLDEN” that more or less excites or interests viewers.

An examination of the additional adjectives students provided reveals results as expected. Students seeing the package with a RAC label wrote down more adjectives such as “environmental”, “natural”, and “forested” among which “environmental” was mentioned repeatedly while students seeing the other package without a RAC label barely offered such words.

**Table 1**  
**The differences between packages with and without a RAC label**

Item	RAC label				Mean Difference
	With		Without		
	Mean	SD	Mean	SD	
Affective responses (On a 7-point scale)					
Favorable-Unfavorable	3.40	1.16	3.24	1.34	.16
Austere-Fancy	2.81	1.06	2.87	1.17	-.07
Fresh-Blurred	3.41	1.18	3.04	1.23	.37*
Healthy-Unhealthy	3.28	1.12	3.12	1.24	.16
Harmonized-Conflicting	3.20	1.27	3.04	1.17	.17
Pure-Mixed	3.48	1.29	3.17	1.25	.31
Caring-Indifferent	3.74	1.33	3.76	1.18	-.02
Inspiring-Inhibiting	4.12	1.26	3.73	1.07	.39*
Taste (On a 5-point scale)					
Smooth	3.12	.96	3.36	.88	-.23
Robust	2.90	.95	2.82	.93	.08
Sour	3.06	1.10	2.86	1.05	.20
Bitter	2.99	1.00	2.95	1.04	.04
Sweet	1.94	.83	1.84	.85	.10
Floral and fruity	1.80	.85	1.78	1.03	.03
Willingness to pay					
Price (NTD)	53.97	24.92	55.71	25.73	-1.74

\* $p < .05$

#### The effects of the RAC label on taste of coffee

As presented by the mean differences for the items of taste in Table 1, none of them reaches a statistically significant level. The presence or absence of a RAC label makes no difference in students’ taste of the coffee, inconsistent with the findings of relevant studies that images on packages affect consumers’ interpretation of flavor (e.g. Mizutani et al., 2010).

#### The effects of the RAC label on recycling behavior

Table 2 presents the distribution of the number of paper cups thrown by students in trash bins and recycling bins. It is used to conduct the Chi-square test of homogeneity of proportions. The resultant insignificant Chi-square of 0.25 indicates that, overall, the proportion of students recycling the cups is essentially the same for the two packages. However, a noticeable effect emerges when breaking down Table 2 with the factor of gender (Figure 3). The proportional distribution of male students who recycled and who discarded the paper cups roughly remains the same whether it is in the situation with or without RAC label. But this proportional distribution of female students seems changed as the proportion of paper cup recyclers is heightened to 58.62% in the situation with RAC label in contrast to the 51.72% in the situation without RAC label.

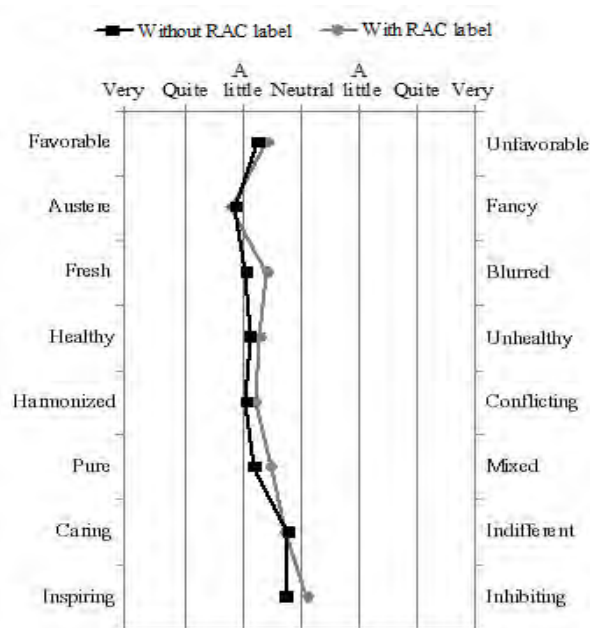


Figure 2 Profile of Semantic Differential Scores

Table 2

A cross table of the paper cup disposal record

	With RAC label	Without RAC label
Trash	28 (49.12%)	27 (54.00%)
Recycled	29 (50.88%)	23 (46.00%)

### The effects of the RAC label on willingness to pay for the coffee

On average, the price that students in the situation with RAC label were willing to pay for the coffee differs little from that in the situation without RAC label. It was between 53.97 and 55.71 NTD (see Table 1), or \$1.80 and \$1.86, for a mug of the coffee they tasted. That is 57% higher than the local price of a cup of Americano, 35 NTD or \$1.17, though this information is not provided as a reference in the questionnaire.

With the price that students are willing to pay for the coffee as the dependent variable, a two-way

ANOVA is conducted as a holistic analysis on the effects of RAC label, gender, and the interaction of both. Results suggest that only gender has a significant main effect and there is no interaction effect between RAC label and gender. Figure 4 displays clearly the gender difference in evaluating the price of the coffee. Female students were willing to pay a price much higher than one that male students would pay for the coffee either with or without a RAC label. The willingness to pay of female students is 58.08 NTD (\$1.93) for the coffee with a RAC label and 64.76 NTD (\$2.16) without a RAC label. Although the price of coffee with a RAC label is lower, the difference of 6.68 NTD (\$0.23) fails to reach the significance level of 0.05 ( $p = .24$ ). In the field of environmental behavior, females have been found to be more intimate with nature and more concerned about the health of both the environment and human (see Franzen & Vogl, 2013).

Considering the evidences of more recycling behavior and higher willingness to pay for the RAC labeled coffee, explanation regarding female students' value about and friendliness toward the green frog of the RAC label might make sense. In addition, the fancy to coffee that Taiwanese female consumers take, which I observed, should add to an in-depth analysis on these results. The role an eco-label might play in activating or mediating the relationship between environmental awareness and pro-environmental behavior particularly needs further study.

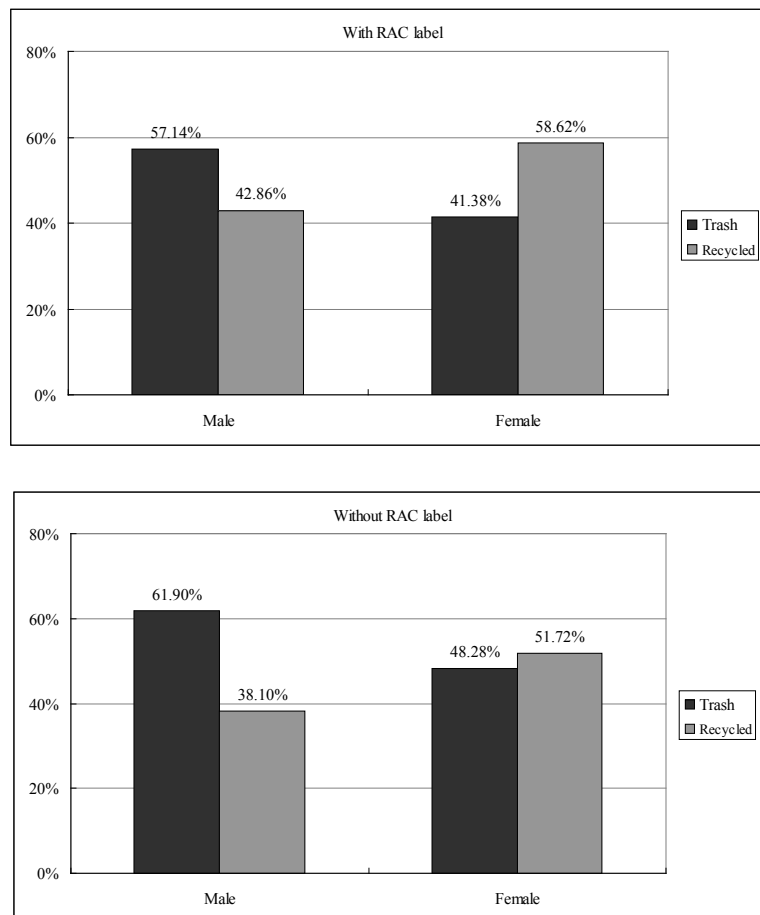


Figure 3 Gender Distribution of the Paper Cup Disposal Record

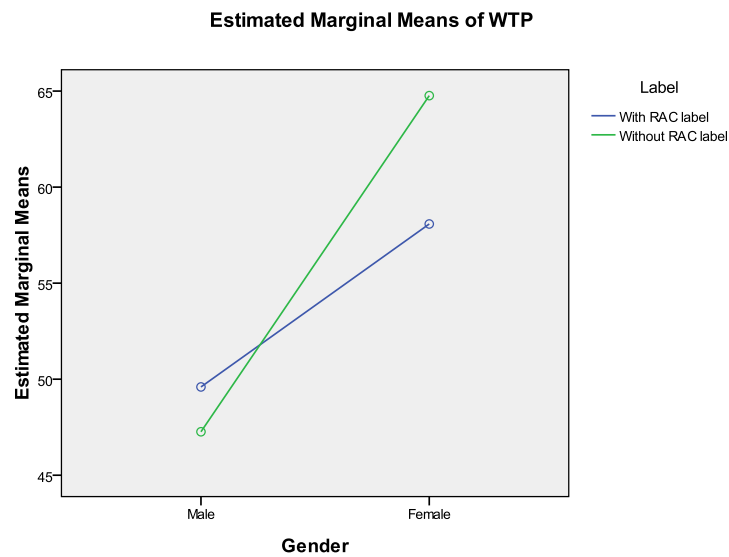


Figure 4 Profile Plots of the Two-Way ANOVA

## V. Conclusion

In sum, the coffee package with a RAC label is likely to impress university student consumers with a complex image that might be associated with density and darkness of rainforests. Despite this negative affective response, they still expressed their feelings with adjectives such as “environmental” and “natural” toward the package with a RAC label. It is found that their taste of the coffee is not affected by the appearance of a RAC label. However, the price students were willing to pay for the coffee with a RAC label is almost the same as that without a RAC label.

A finding of practical importance is that female consumers seem to be more susceptible to the influences of the RAC label. The proportion of female students who recycled the paper cup used for the coffee taste trial is higher when they are presented with a package with a RAC label. Female students were also more willing to pay a higher price for it than male students were. Although this could be a result of the inherent gender difference in environmental attitude, the findings here have implications for strategies of green marketing. From a perspective of environmental education, the marketers of RAC labeled coffee may need to think over how to reach male consumers.

There are limitations of the present study that should be acknowledged, including the design and control of the experiment of coffee taste trial as well as other concerns of instrumentation and sampling. For example, future studies could improve the visual design of packages and the precision of the adjectives of semantic differential scale.

## VI. Acknowledgements

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# **Study on the Influence of Tourist Motivation on Visiting Rattanakosin Island in Bangkok, Thailand and Their Expectation and Satisfaction Based on Cultural Heritage Destination Attributes**

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## **Abstract**

Tourism industry is one of the most important industry in Thailand. Thailand is well known for rich cultural resources country. Rattanakosin Island has the main historical significance, heritage sites and major tourist attractions in Bangkok. Rattanakosin Island is also one of the landmark in Thailand. The number of tourists has increased a lots recently. Congestion, disorder, bad management, poor maintenance and decadent scenery are effect to tourism in Rattakosin Island. It might cause the negative impact to cultural heritage sites.

This research investigated what motivates tourists to visit cultural heritage sites in Rattanakosin Island area and what expectation and satisfaction tourists have on cultural heritage destination attributes in Rattanakosin Island, Bangkok. It's also investigate the relationship between tourist's motivation, cultural heritage destination attributes and tourists' overall satisfaction. Besides that, this study also identify which attributes satisfy tourists who have visited cultural heritage destination in Rattanakosin Island.

This research used questionnaires in survey and were collected from the main destinations area in Rattanakosin Island, Bangkok and were also distributed online. The target population in this study were the international tourists who visited culture heritage site in Rattankosin Island area, Bangkok, Thailand. The ages of respondents are between 20-65 years or above. The collected data are analyzed by using statistical methods in Statistical Package for Special Sciences (SPSS) program, such as descriptive statistic, T-test, multiple regression analysis and correlation analysis, and Analysis of Variance (ANOVA).

The result revealed that Motivation, Cultural heritage attributes were influence with tourists' overall satisfaction. And the result also showed that there were significant difference in overall satisfaction based on demographic characteristic and behavior characteristic of respondents.

**Keywords:** Cultural heritage tourism, tourists' motivation and satisfaction, cultural heritage destination attributes, tourists' characteristics, the relationship between tourists' motivation, cultural heritage destination attributes and tourists' overall satisfaction

# The Influence of the Revision of Analyst Reports on the Portfolio of Mutual Fund

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## **Abstract**

This research project posits and investigates how the revision of analyst reports affects the portfolio of mutual fund in the United States stock market. When there emerges good news in the market, the analysts would probably upgrade the earnings forecast or their recommendation. And the fund managers would probably adjust their portfolio. Accordingly, I aim to detect whether the changes of the stockholdings may be triggered exclusively by the news or the revision of analyst reports.

Equity funds disclose their portfolio in the end of every season. Coincidentally, institutional investors adjust their portfolio by the momentum strategy. It may be interesting to explore that the end of quarter stockholdings changes may result from both fund manager responding to security analyst's recommendation and these managers' strategic window dressing conducts. Consequently, I employ the revision of earnings forecast and the revision of analyst recommendation to investigate the influence on the portfolio of mutual fund. Moreover, if the revision of analyst reports is a good predictor, then I plan to further explore the reactions of fund managers to the revision of reports of different types of analysts.

**Keywords:** Revision of Earnings Forecast, Revision of Analyst Recommendation, Mutual Fund Portfolio, Window Dressing

## **What Do People Study Onmedical Tourism? A Review of Chinese Academic Papers Related to Medical Tourism**

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### Abstract

Medical tourism, combining the very polarized purposes of pleasurable travel and potentially stressful health care services, is an emergent and growing business worldwide (Chuang, 2014). It has become the new favorite of Chinese tourism market (Fan & Liu, 2013), and it is among the fastest developing industries in China that offer a great opportunity for overseas patients to save a huge amount on major cures and procedures (easydestination.net, 2015). Chinese tourists also have shown great interest in this new tourism trend, and tens of thousands of Chinese tourists mademedical tours to Japan, Korea and Thailand (marketingtoChina, 2015).Medical tourism has generated a special interest in the Chinese tourism academia, and an increasing number of academic papers were published in Chinese language, but little research has been undertaken to examine the publications written in Chinese language.What do people in China study when they study medical tourism?This study purports to offer anaccount on Chinese academic papers related to medical tourism by adopting a thematic content analysis method.

The data was drawn from the China National Knowledge Infrastructure (CNKI) database, which is the most comprehensive system of China academic knowledge resources--China Integrated Knowledge Resources Database, and over 90% of China knowledge resources were covered by this database including journals, dissertations, newspapers, proceedings, yearbooks, reference works, encyclopaedia, patents, standards, S&T achievements and laws and regulations (CNKI.NET, 2015).This study focuses on journal articles; the keywords “medical tourism” was used for the search and a total of 133 entries from 1989 to present were generated.

In terms of frequency, major themes reflect the strands of research during the review period are identified. The following table is a summary of the key findings.

	Major themes	Frequency	%	Highlights	Observations
1	International medical tourism development and its implication to China	44	33%	Mostly mentioned countries: India, Japan, Thailand, Singapore, Korea	Open mind; eager to learn

2	Feasibility studies on medical tourism development in China	40	30%	Discussed medical tourism development in 13 provinces respectively, 6 papers about Shanghai, 5 papers about Hainan province and Guangxi province respectively, 4 papers about Shanxi Xi'an.	Great potential in China; focuses on resources and SWOT analysis
3	Status quo of medical tourism development in China and suggestions for further development	24	18%	Medical tourism ongoing, call for: government support and involvement; joint efforts of government, tourism industry and medical industry	Mainly from "supply" side, understanding "demanders"?

This study indicates that medical tourism has generated an increasing interest in the Chinese academia, but to keep pace with the fast industry development and to contribute to further development of medical tourism in China, more in-depth studies in a wider range of topics are needed. Based on this content analysis, suggestions for further studies on medical tourism in China will be discussed.

**Keywords:** China medical tourism, content analysis, China academic papers

## Aspect Analysis for Deceptive Review Detection in c-Commerce

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### Abstract

Quite a number of reports in the media have revealed the severity of deceptive product reviews posted to various e-Commerce and social media Web sites. Nevertheless, very few studies have been conducted to examine the credibility of online product reviews because of the lack of an effective computational methodology. Unlike the general Web spam problem, deceptive product reviews (i.e., spam) could just look like legitimate reviews (i.e., ham), and so they are difficult to be detected. One main contribution of our research work reported in this paper is the development of a novel computational methodology to combat online review spam. Our experimental results shows that the KL divergence and probabilistic language modeling based computational model is effective for the detection of deceptive product reviews. Empowered by the proposed computational methods, our empirical study found that around 2% of the product reviews posted to a typical e-Commerce site are spam.

**Keywords:** Sentiment Analysis, Machine Learning, Online Review, e-Commerce

# **The Study on the Relationship between Product Defects, the Factors of Product Recall and the Procedures of Product Recall**

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## **Abstract**

Globalization of supply chain has led to change in global production systems and the increasing complexity of global supply chains. Thereby increasing to improve various risks and product security vulnerabilities. As supply chains are extended by outsourcing and stretched by globalization, differences between manufacturers that are linked to geography, led to disruption risks and lack of visibility, and make supplier management more difficult. Disruptions that impact product quality can result in product recalls which create the need for costly reverse supply chain activities. Product recall is occurred usually. The study tries to find the procedure of product recall about food industry, consumer electronic industry and automobiles industry. We use content analysis for product safety and security. Explore the relationship between countries product liability law, cost, product traceability and procedure of product call.

**Keywords:** Supply Chain, Product Recall, Traceability, Recall management

# Working Capital Management: The Role of International Expansion

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## Abstract

This study is the first one to investigate the working capital management from the viewpoint of firms' international expansion. To measure working capital management, previous studies always used measures based on the Cash Conversion Cycle (CCC) (Soenen, 1993; Deloof, 2003; Padachi et al., 2006). The CCC is a dynamic measure of ongoing liquidity management and it combines both balance sheet and income statement data to create a measure with a time dimension.

Using listed companies in U.S. as sample divided into multinational corporations (MNCs) and domestic corporations (DCs), this study examines the determinants of cash conversion cycle (CCC) and a firm's internationalization effect on CCC. Our main findings are as follow: (1) Working capital management policy will change after firms operate internationally. Comparing with DCs (77.40 days), MNCs have longer CCC (91.69 days). Specifically, firms lengthen accounts receivable collection periods and inventory sales period and reduce accounts payable period when they operate internationally. However, it seems that MNCs adopt too conservative working capital policy, and firm performance (measured by Tobin's Q) decreases. (2) Our results demonstrate that firm performance will decrease when a firm lengthens its CCC for both MNCs and DCs. In addition, when MNCs try to shorten CCC then firm performance has larger increases compared to DCs. (3) As for the determinants of CCC, cash flow, firm size and fixed assets ratio are common factors for both MNCs and DCs. However, the CCC of DCs is also influenced by debt ratio. Our results can be a reference for firms planning for international expansion to make or adjust short-term financial policies.

**Keywords:** working capital management, international expansion

# Therapeutic Recreation for Children Development Applied in University

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## Abstract

Pre-school children with development delay have been received limited treatment resources in Taiwan, either medical or educational treatment. Due to the urgency of early intervention, intensive and continuing rehabilitation program suppose be applied anytime and anywhere. Based on that, rediscovering treatment resources in community is the major goal in this research. Facing the declining birth rate, Ministry of Education call on that university should activate resources for community and the study follow suite to locate the treatment place at university in community. In this research, we apply therapeutic recreation for developmental delay children and make full use of facilities and available classrooms in Minghsin University, Hsinchu County, Taiwan. The purposeful recreations including fitness, sensory integration, music and movement, drama, creative art, horticulture, musical instrument, and hippo therapy are all applied as treatment programs. The study clients, diagnosed developmental delayed children, are all coming from the community in Xinfeng Township, neighboring residents. The working team embraces 2 occupational therapists, 3 educators and 1 project host, and those 6 members operate an industry-academy cooperation project, called "Therapeutic recreation for children development". We evaluate every client before and after to arrange the proper therapeutic recreation in-between time and also to monitor the improvement of development. We also conduct the satisfaction questionnaire of service for clients' parents. The results of study state as following: First, the therapeutic recreations can benefit children with development delay. Second, these recreation activities get the priority ranking form children, and the top three are hippo therapy, horticulture, and sensory integration. Third, the attendances and improvements are even better than traditional therapy, because recreations trigger children's inner drive. Fourth, most parents are satisfying our programs, especially university campus provide them free parking space, natural landscape, and varied programs. Fifth, this project actually enhances more parents' courage to bring out their children with developmental delay to be treated via therapeutic recreation. With the project results, we conclude that therapeutic treatment can be applied in community, especially in university, and purposeful recreation can be a kind of modality for early intervention, however, children and their parents tend to natural activities and this kind of recreation can provide positive reward for their participation in our program.

**Keywords:** developmental delay, therapeutic recreation, community resources



# Business Analytics Certifications Program for IS Curriculum

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## Abstract

This study is to design and develop business analytics or big data certifications program for information system (IS) major in the college of business administration at a small public university in the United States. The research questions are the following: how many credits or courses in the certificate program, who will teach the program, who will take this program, what elements of computational, statistical, analytical, data visualization, and communicational skills will be included in the business analytics program?

Some administrative questions are: how will the teaching faculty get their training before they teach students in classroom? That means, can we get all the financial resources and times for this from our administrators? Most importantly, will this program attract more and enough students from existing university students and/or from local community to justify all the efforts and times for the processes we are going through?

In addition this research is going to relate how the program will fit with IS 2010 Model Curriculum and Guidelines for Undergraduate Degree Programs in IS of Association for Computer Machinery (ACM) and Association for Information Systems (AIS).

For the literature review, to design and develop the program, this research will examine both vendor-specific certificate programs and higher education certified programs, which are currently available for students. In the commercial market, there are vendor-specific big data certifications programs offered by such as Teradata certified program, Oracle big data appliance platform program, HP's big data certification for Vertica program, Cloudera certification program, etc. In the academic area, higher education big data certifications programs are also available from University of Maryland's two 15-credit certificate programs for graduate students in the areas of foundation in business analytics certificate and predictive analytics certificate and University of Delaware's 12-credit certificate in analytics, whose courses are analytics basics, big data tools, process control and capability, and individual project.

As a result, the research goals focus on two major things: IS faculty's endeavor to develop the certificates program through literature review and administrators' support for creating an effective program thereby this training program meets with both the expectations of students and future employers.

**Keywords:** IS Curriculum, Business Analytics, Big Data Certifications, AIS

# How Low Control Drives Preferences for High-Effort Products and Services

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## Abstract

The present study demonstrates that when people feel threat to their control over outcomes in life as a basic human drive to behave, they rely on products and services requiring high efforts to possess as a means to empower the self and reestablish control. This study aims to replicate and extend previous research by Cutright and Samper (2014) with different research context and additional test of moderators. Preliminary results from an experiment are reported in this report, however.

**Keywords:** personal control, loss of control, control restoration, product and effort, hard work

## I. Introduction

We strongly believe that we can control our outcomes in life. We expect our own efforts and actions will result in desirable, positive outcomes. For example, if an undergraduate student studied hard for the final exam, he expects to get higher score in the exam. If a worker makes an effort to show better performances in the workplace than colleagues wants to be promoted I the next evaluation. In the same vein, a patient with painful chronic illnesses wishes to recover more quickly. Kelly (1971) described that this is considered to be our main behavioral motivation, the reason we keep pursuing our goals and the reason we are not afraid of fears of what the future holds.

However, when our belief is threatened by unexpected, negative event, we sometimes have to accept the fact that we cannot always drive desired, positive outcomes like the Almighty. For example, when the terrorist attacks occurred in the United States on September 11th, 2001, many Americans realized that they were so weak and could not control their environment as they intended to. As Cutright and Samper (2014) described, the event of horrific violent act, devastating natural disasters, and political, economic upheaval are the primary events, which cause consumers to question their capability to control the outcomes in life.

As we face such threats to our control, what role should products play in helping us achieve our goals? Like Reebok's Easy-Tone shoes (Cutright and Samper, 2014), should products help consumers achieve desired outcomes by making the way as effortless as possible? Or Like Nike's Trainer One shoes (Cutright and Samper, 2014), should products help consumers achieve desired outcomes by making the way as effortful as possible? Challenging the long-lasting traditional view that low control people prefer to engage in effortless task has been

proposed and tested by Cutright and Samper (2014). In the current study we replicated their results and aimed to extend.

## II. Literature Review

### 1. Personal control

For the decades, many scholars tried to define the notion of personal control. Mirowsky and Ross (1989) defined personal control as an expectation that outcomes are depends on one's choices and actions. This conceptualization of control is similar to that of an expectancy theory. Vroom (1964) described expectancy as a belief that a particular act will be followed by a particular outcome. That is, personal control is a kind of the cognitive linkage between efforts (actions) and outcomes. Usually, the sense of personal control came from successful achievements and accomplishments. Also, it increases with health, education, employment, income, occupational status.

The concept of a personal control has been described in the literatures under the variety of synonym expressions such as, "mastery" (Pearlin et al., 1981), "self-efficacy" (Bandura, 1982), "instrumentalism" (Wheaton, 1980), "self-directedness" (Kohn and Slomczynski, 1990; Rodin, 1990), "personal control" (Baltes, Wahl, and Schmid-Furstoss, 1990), "primary control" (Schulz, Heckhausen, and Locher, 1991) and "internal locus-of-control" (Hiroto, 1974; Rotter, 1966), and "powerlessness" (Seeman and Lewis, 1995; Seeman and Seeman, 1983), "helplessness" (Seligman and Elder, 1986), "fatalism" (Kluckhohn and Strodtbeck, 1961; Wheaton, 1980), and "external locus of control" (Rotter, 1966). Although, definitions are a little bit different from each other, they are in common to the perception of effective casual agency.

In fact, feeling control over life is associated with many positive outcomes, including greater psychological well-being (e.g., Abramson, Seligman, and Teasdale 1978; Lazarus and Averill 1972; Thompson 1981), physical health (e.g., Karasek 1990; Rodin and Langer 1977), and financial health (e.g., Perry and Morris 2005). Rothbaum & Snyder (1982) described that people are happiest and healthiest when there is an optimal fit between self and environment. For example, Lachman (1986) suggests that high personal control hospital patients are reported better health, less severe symptoms, faster recovery from illness, and greater longevity. In addition to this, Langer (1975) described that patient who perceived themselves as a stress controller had been induced required less pain relief drugs and exhibited less anxiety as well. Furthermore, Zimmerman & Rappaport (1988) suggest that the sense of control is also important for successful aging because it is associated to self-efficacy, self-confidence, and self-acceptance.

A personal control is the sense that we believe ourselves as the agent who causes the consequences. According to the theory of personal causation, de Charms (1968) describes people want to feel sense of mastery and competence over their environment. Pearlin & Schooler (1978) described mastery as "the extent to which one regards one's life chances as being under control in contrast to being fatalistically ruled.

A person who has a sense of mastery may feel satisfied with his/her control competency over life circumstances. Gecas (1989) suggests that high sense of mastery is associated to positive consequences for health, physical functioning and well-being. Therefore, it is expected that the high sense of mastery is associated with high levels of life quality and well-being. Also, those with higher mastery will have better health, and lower

depression.

The sense of empowerment is a feeling that one believes himself as a powerful determining agent over life outcomes. Keisha and Adriana (2014) define it as the sense that one can determine their own outcomes. Rappaport (1987) described in his article that developing a sense of control over life is called “empowerment”. He said the key aspect of empowerment is gaining a sense of control over life.

The example of empowerment can be found in Internet usage. Using the Internet can be a representative tool for empowering users. By effectively using and utilizing the Internet, individuals regain their diminishing internal and external structures. In other words, people empowering themselves via internet usage and they are regaining a part of the lost control over their lives. If we realize our empowerment over time, it leads to a perception of more control over lives. In the same way, we suggest that product can be a tool for making consumers feel empowered and help them to restore decreased sense of control.

Personal control is consistent with motivation theories and it is more closely related to the intrinsic motivation. Adler (1930) demonstrates one's competence over life events as the individual's major motivational force. Deci (1975) described intrinsic motivation behavior as “a person engages in to feel competent and self-determining”. White (1959) described this as “effective motivation” or “competence motivation”. He asserts that people have an intrinsic need to manipulate the environment and they are motivated to engage in challenging tasks because successful tasks make them feel competent and empowered.

People vary in the sense of control. Some feel they can do anything as they intended to. These high control people see themselves as responsible for their own successes and failures. And they regard failures as the results of personal fault. Generally, people with high levels of personal control are effective forces in their own lives. In contrasts, low control people believe that good things that happen are because of fatalistic fortune that they desire but do not design. They feel that personal problems mostly caused by bad breaks and feel little ability to regulate or avoid bad things that happen. Wheaton (1980) described that low-control perceived people have less motivation and success in solving problems because their belief in the efficacy of external, rather than personal, forces makes active attempts to solve problems seem pointless.

## **2. Loss of control**

Through continued experiences of failure, individuals realize that their own behaviors cannot achieve desired outcomes. Ross (1983) described that continued experience of failure often makes people to feel powerlessness and helplessness. The powerlessness is the belief that outcome is determined by external forces not by oneself, such as powerful others, luck, fate, or chance. Also, several studies suggest that decreases in personal control result in many negative consequences for individuals. Kobasa (1982) assert that people with a low sense of control have a tendency to respond to stress with greater psychiatric and physical symptomology. Birren & Fisher (1991) describes perceived loss of control causes physical or social deterioration in our lives.

The example of losing control can be found in case of the elderly people. They are more likely to perceive a loss of control than the young. For example, the loss of a spouse or descendant, an unwanted retirement, continued chronic illness makes the aged to feel significant loss of control in their lives. This loss of control can lead to a further deterioration and ill health. Furthermore, when individuals encounter a variety of negative events, including having an automobile accident (Robertson, 1977), being a crime victim (Perloff & Fetzner, 1986), having

trouble finding a job (Weinstein, 1980), or becoming ill (Perloff & Fetzer, 1986) or depressed (Kuiper, MacDonald, & Derry, 1983), being stuck in endless traffic, being placed on hold after a frustrating interaction with the cable company, or not having the means to buy the medicine or food your family feeds, horrific acts of violence, devastating natural disasters, many people would recognize that it is difficult or they cannot achieve desired outcomes in their lives (Cutright and Samper, 2014).

### **3. The desire to regain control**

The desire to restore personal control is consistent with researches on motivation. Carver and Scheier (2001) described that when people perceive a discrepancy between desired state and current state, they are motivated to reduce this discrepancy. Then, how might people defend their fluctuating personal control against randomness in our lives? Rothbaum (1982) argues that individuals first attempt to restore control directly, but when it seems not possible or unsuccessful, they attempt to gain secondary control. Also, Keisha and Adriana (2012) described when people recognize control threat, they usually searching for the things that are well-structured and under control via external forces such as religion and politics.

For example, United States on 9.11, 2001 shocked all over the world. In the center of this horrible tragedy, many Americans realized that they are so weak and cannot control their situations by their own will. But, they soon heightened support for the government (Willer 2004), strengthen their religious beliefs (Schuster et al. 2001; Smith, Rasinski, and Toce 2001), and increased tendency to spending on consumer goods (Zukerman 2002).

In the same way, the loss of control often leads people to rely on higher level sources of control. Melanesian fisherman in foreign ocean and dangerous waters has been shown to rely on supernatural sources of control (Malinowski, 1954), among Israelis when under military threat (Keinan, 1994), among those with a high chronic need for personal control (Keinan, 2002) and among baseball players who are strongly controlling their performance on the field (Burger & Lynn, 2005). In fact, the ways of control restoration is closely related to the compensate desire. The reason why people support external system is because they compensate for lowered level of personal control. Individuals are compensating for their lack of control by increasing their personal control in other domains.

### **4. Products and effort**

It is suggested that when consumers have low personal control, they want to use products as external sources that provide functional tools and symbolic values. This makes individuals to believe as if they have driven their own outcomes. We support our argument with many works have studied on consumer-brand relationships, brand personality (Aaker 1997), consumer-brand relationships (Aggarwal 2004; Fournier 1998), brand imagery (Batra and Homer 2004), brand identity (Schmitt, Simonson, and Marcus 1995), and brand communities (Muniz and O'Guinn 2001), brand symbolism (Belk 1988 and Levy 1959). They are telling that individuals usually form various types of relationships and connections with brands. The main thesis of these works is that consumers have a tendency to regard brands as relational partners.

Furthermore, as Escalas and Bettman (2005) described, brand helps consumers achieve goals by playing a role as symbols of accomplishment and self-esteem. By offering functional and symbolic support, products help consumers contribute their own effort to achieve desired outcomes. And, make them to feel as if

they have driven their outcomes by themselves. So, it is suggested that consumers want to use higher effort products that can make them feel self-empowered and masterful.

### **5. Hard work**

Throughout this study, that the long-lasting traditional view that low control people engages in effortless task is challenged. This will broaden our insight and propose that low control consumers are more likely to prefer the high effort experiences. Individuals often seek out painful and effortful experiences rather than looking for pleasant, easy experiences. Examples include the popularity of painfully spicy foods, painful and effortful activities such as mountaineering and marathon. Also, many tribes over the world have practiced rituals causing pain and effort. Kaufman(1999) suggests that people want to derive meaning and value from their hard-earned accomplishments and the pains they endure on the way to goal achievement. In other words, people tend to value objects they have worked hard to earn over those obtained without an effort.

Several empirical studies also suggest that high effort behavior is advantageous and beneficial. It appeared to increase evaluations of material objects, outcomes, feeling states. Aronson & Mills (1959), for example, asserts that the more effort individuals invest—whether in the form of time, physical exertion, pain, or money—the more positively they evaluate the product of that effort. In the same way, many sports studies (McAuley & Courneya, 1992; McAuley, Courneya, & Lettunich, 1991; Rudolph & McAuley, 1995) have demonstrated that intensive physical exercise increases self-efficacy. Moreover, high effort in the work provides fulfillment of people's intrinsic needs to be competent, effective, and self-determining. In other words, effortful task often gives meaning to the achievement and a symbolic value to the associated outcome. Therefore, we draw our hypothesis as blow.

**Hypothesis:** When control is low, consumers will desire to partner with brands that require high effort.

## **III. Method**

### **SHOE PRINT ADVERTISEMENT STUDY**

This study used an experiment with a 2(Low control vs High control) by 2(Low effort vs High effort) between subject design, conducted offline and accompanied by a survey. The respondents were students at a national university located in Daegu, South Korea. The purpose of our study is to establish that when control is low, consumers desire to partner with brands that require high effort. We manipulate control via five relevant questions. We manipulate effort by adapting a virtual shoe print ad, holding outcomes constant and making the ads identical except for their effort emphasis (High versus Low).

**Participants and Procedure.** One hundred and forty-four undergraduate student participants at Kyungpook National University (median age = 25) were randomly assigned to this 2 (personal control: low vs. high) x 2 (effort required: low vs. high) between-subjects experiment. All Participants first completed a control manipulation that asked them to answer about the current state of their feeling of control. Participants next viewed an ad for the newest shoe. The low-effort ad emphasized that by using the shoe, limited consumer effort was required to obtain desired results. The high-effort ad emphasized that high consumer effort was required to obtain the same results. Participants then selected the shoe which they are more likely to purchase and rated how likely they would be to purchase the product by five point likert scale (1 = very unlikely, 5 = very likely). Next,

they asked their attitudes about the product (Product attitude) and thought about how they would feel by using the shoe (Product emotion).

The highly correlated index ( $\alpha$  .95) included strong, confident, empowered, self-sufficient, determined, driven, and in control (1 = very unlikely, 5 = very likely), which all loaded on the same factor. We included other filler measure (gullible) to ensure that the construct of empowerment drove the key effects. Finally, participants indicated their current and ideal weight.

As an effort manipulation check, participants were asked to answer the quiz which fills in the blanks of the meaning of English vocabulary. Next, participants indicated the degree of their effort invested on the quiz task (1 = very unlikely, 5 = very likely). As a control manipulation check, participants were asked to answer about the current state of their feeling of personal control. (1 = very unlikely, 5 = very likely).

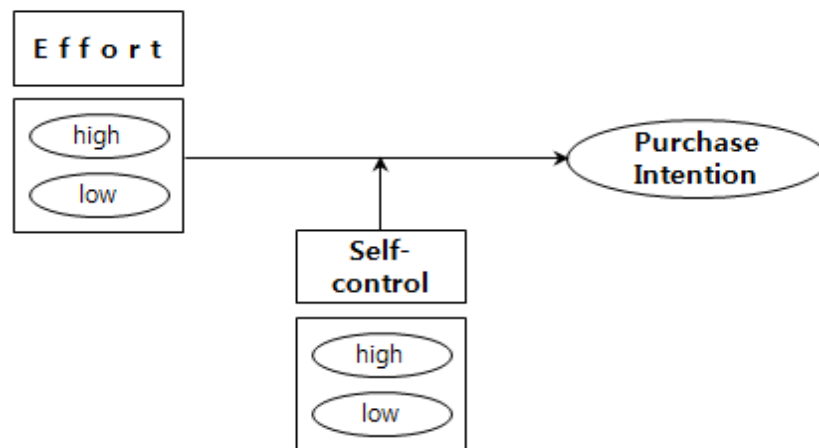


Figure 1. Research model

#### IV. Conclusions

We demonstrate how low feelings of control lead consumers to prefer higher effort products. Our study reveals that consumers have a tendency to partner with high effort products as a mean to self-empowerment and control restoration. Furthermore, challenging the long-lasting traditional view that low control people usually engages in effortless task, we found that they actually try to engage in more effortful tasks, particularly when consumers are supported by the reassuring functionality of brands. Therefore, low control consumers will likely to prefer the high effort product rather than low effort product.

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# The Relationship between Low Personal Control and High-Effort Product

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## **Abstract**

Consumers often face situations in which their feelings of personal control are threatened. As consumers face such threats to their control, what role should products play in helping consumers pursue their goals? We suggest that when feelings of control are low, consumers will want partner with products requiring higher effort as a means to empower the self and reestablish control.

**Keywords:** personal control, loss of control, control restoration, high-effort product, mastery

## Probabilistic Promotions: Monetary vs. Non-monetary Promotions

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### Abstract

Consumer promotions often contain varying degrees of certainty as to the nature of the promotion. Accordingly, when it comes to designing consumer promotions, some important decisions for marketers to make include (a) whether to use a fixed or uncertain (probabilistic) promotion, and (b) whether to use a monetary (e.g., price discounts) or non-monetary (e.g., free gifts) type of promotion. In the current research, we investigate the effectiveness of uncertain monetary promotions relative to fixed monetary promotions. In addition, we examine consumer response to uncertain monetary promotions in relation to uncertain non-monetary promotions.

Three studies propose the effectiveness of uncertain monetary promotions relative to fixed monetary promotions as well as the effectiveness of uncertain monetary promotions in relation to uncertain non-monetary promotions, in which the perceived relevance mediates the effectiveness. Future studies can test further reasons behind consumers' tendency to favor uncertain monetary promotions over uncertain non-monetary promotions. In addition to the perceived relevance of the promotion, for example, avoiding the pain of paying can be a source of such preferences.

**Keywords:** Consumer Promotions, Uncertainty Effects, Promotion Relevance

# **Effect of Leadership Ethics, Trust in Leadership, and Commitment on Attitude toward Changes: A Study on Batik Educational Foundation in Surakarta, Indonesia**

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## **Abstract**

Understanding and application of leadership ethics are becoming important aspects in conducting the process of management and organization change to encounter the more dynamic environmental change currently. Leadership ethics play an important role in establishing the trust level of employees on leadership and will strengthen the materialization of commitment of human resources that each of them is important and inseparable from organization. If one has a trust on leadership and a strong commitment to organization, this will very much influence his or her attitude and behavior significantly in positively encountering each organizational change program. The objective of this research is to examine and discuss the effect of leadership ethics, trust in leadership, and organizational commitment on attitudes toward change.

All of items of each variable fulfilled the criteria of validity and reliability as each variable had the value of Cronbach  $\alpha$ , which was greater than 0.6. The results of classical assumption tests, namely: normality test, heteroskedasticity test, autocorrelation test, and multicollinearity test show that all of the criteria were fulfilled. The data of research were analyzed by using the hierarchical regression analysis based on the assumptions claimed by Baron and Kenney.

The result of hierarchical regression analysis shows that the leadership ethics, trust in leadership, and commitment have a directly positive and significant effect on the attitudes toward change. In addition, the trust in leadership and organizational commitment each partially mediate the effect between the leadership ethics and the attitudes of the teachers on attitude toward change. The implication of the findings encourages the management of Batik Educational Foundation of Surakarta to ensure that ethical leadership behaviors of the school principals are applied so as to establish the trust in leadership and strengthen organizational commitment of teachers in an attempt to ensure the materialization of positive attitudes in actualizing the change management to the improvement of sustainable teaching and learning process quality. Furthermore, the related theorists need to study the results of this research from the relevant perspectives.

**Keywords:** leadership ethics, trust in leadership, commitment, attitudes toward change.

## I. Introduction

Regulation of the Ministry of National Education Number: 28 of 2010 claims that a school principal is basically a teacher. He or she is a teacher who is deemed to fulfill certain requirements to hold the functional position (an unofficial position within the organization) as the manager of an educational unit. Regulation of the Ministry of National Education Number: 28 of 2010, Chapter I Article 1 Paragraph 1 states that school principal is a teacher who is given additional task to lead. As a leader, the principal is responsible to supervise the learning/teaching process that is performed by the teachers. Therefore, the leader and those who are led in any organization should be perceived as an entity in which each gives clear/explicit, measured, and open contributions to be rectified in every aspect in order to improve the effectiveness of the individual's, group's, and organization's work performance. On the other hand, as a teacher who may serve as a school principal at one time, a teacher should realize his/her role in helping the school principal to stay focused on the ethical behavior.

Yousef (2000) puts a reminder that every present and future organization should execute the organizational change management that is related to structure, human resources, tasks, and technology. The management should be well-accomplished to fulfill the environmental demand as an effort to maintain its existence and survival better. According to Yukl (2010), every program of organizational changes, that is planned, implemented, and developed, can influence behavior, either in the form of rejection, compliance, or commitment. It means that the organizational management of change should be oriented to strengthen the change, since the commitment to change of every member of the organization will affect the dynamics of change that is based on the assurance of ethical leadership behavior.

This research was executed due to the importance of the role of ethical leadership in developing the trust and commitment of each resource who is involved in managing organizational changes continuously to improve the provision of the educational services for the students and for other stakeholders. The problem statement of the research is formulated whether leadership ethics, trust on leadership, and organizational commitment affect the attitudes toward change in the Batik Education Foundation of Surakarta. objective of this research is to examine and discuss the effect of leadership ethics, trust on leader, and organizational commitment on attitudes toward change in the Batik Education Foundation of Surakarta.

## II. Literature Reviews

### Leadership Ethics

Brown & Trevino (2006) elucidate the result of their review which shows that the leadership ethics still needs to be studied as an opportunity to find various ways to improve leadership effectiveness. Ali & Al Qawaihan (2008) claim that Islamic concept working should uphold ethics. It is the source of freedom and the means of personal development, self-esteem, self-fulfillment, and satisfaction. On the other hand, on explaining the work behavior of an ethical leader, Yoesef (2000) states that ethical leader focuses on the hard work as one aspect of leadership ethics, which has to be demonstrated and promoted in the act of cooperation with various parties based on the principles.

Islamic leadership ethics or Islamic management ethics reflect managerial or leadership behavior which is based on Islamic work values. It means that the establishment of the leadership ethics cannot be separated from

the underlying work values. The role of the leadership ethics which results in work ethics is strongly perceived in the global business environment, which among others, according to Caplov in Yousef (2000) is characterized by the fast and manifold dynamics of the environmental change. Avey, Wernsing, & Palanski (2012) stress the need of the work ethics which originate from the leadership ethics, which is based on and oriented toward the improvement of motivation, commitment, and which decreases the level of volition to resign from the work place and which becomes the reputation barometer of the leadership success in achieving the objectives of the organization.

### **Trust in Leadership**

Rousseau, Setkin, Burt, & Commerer (1998) elucidate trust as psychological nuance which entails the desire to surrender and accept other party's behavior which is based on the expectation of action's fulfillment and/or of beneficial results. This definition stresses on the expectation for positive result as the foundation of the trust to other party.

Different opinion is proposed by Podsakoff, MacKenzie, Moorman, & Fetter (1990) who summarize several definitions of trust, among others, from Cook and Wall (1980), who elucidate trust as “faith in and loyalty to the leader”. Trust is actually required by everyone, especially those who perform interaction and exchange process. Gomes and Rosen (2001) state that trust is an important element in developing the achievement effectiveness on the objectives of the organization. Every personnel as an individual, a member of a group, and a member of an organization, is eager to offer the best contribution for the interest of the organization. Meanwhile, Barney (1994) states that trust can become one source of competitive advantage that is difficult to emulate, since it is developed based on unique behavioral skills.

Moreover, as stated by Morgant & Hunt (1995), the presence of trust among the related parties can evoke the hidden agreement, decrease the level of volition to resign from the company, improve the work cooperation, enact the function of constructive management of conflict, and control the uncertainty of the situation. Lastly, according to Schoorman et al., (1995), the presence of trust positively correlates with the perception of the level of the leadership ability in establishing harmonious relationship with the personnel, which becomes one indication of excellence for the quality service for the customers.

### **Organizational Commitment**

The effectiveness of an employee's performance in an organization needs certain level of commitment. It should be noticed and developed by every rank of leadership, so that every subordinate has a high commitment. According to Robbin & Judge (2011), commitment is the direction of one's orientation that addresses the organizational interests. Commitment comprises of loyalty, identification, and organizational involvement. Meanwhile, Gibson, Ivancevich, Donnelly, & Konopaske (2006) explain commitment as the level of identification, involvement, and loyalty that are expressed by the staffs to their organization. It means that if someone identifies him/herself more with his/her job and/or organization, and/or with his/her superior, it can signify that he/she has higher level of commitment. Similar thing happens if he/she is more involved or more loyal to the organization

The commitment level of each employee, both the leader and the subordinates, should always be developed as a media to improve the effectiveness of the individual, group, and organizational

performance. One way to develop the commitment is by presenting consistent ethical leadership behavior that is passed on to each superior, colleague, and subordinate to behave ethically as well. The stamina of the high commitment of the behavior of the organization members must be maintained. It is important since it will lay the foundation for the development of various positive and constructive attitudes such as supporting the changes, positive imaging toward changes, and willingness to behave and perform above the expected ones.

### **Attitudes toward Changes**

The comprehension and the application of the organizational change are demands that have to be met by the leader in order for the organization to be able to take the opportunity that is offered by the environment. A leader is very concerned with the comprehension and application of the agent of change. Moreover, every leader is a change agent. An agent of change, according to Smither, Houston, & McIntire (1996) is the certain party who is responsible to implement changes in an organization. The successful reputation of a person's leadership can be perceived from that leader's success in leading the change. If a leader is adept to execute the management of change correctly in line with the aspirations of the environment, it will increase the leader's leadership reputation.

Hodgetts (2002) states that there are several possibilities of attitude or response toward changes, namely: refusal, resistance, tolerance, and acceptance, which according to Robbin and Judge (2011) are connected to elements of attitude themselves, namely: cognitive, affective, and attitudinal tendency. Robbin and Judge (2011) elucidate attitude as a statement of judgment on certain event, person, or object, both the pleasant and the unpleasant one.

### **Leadership ethics and trust in leadership**

The correct conceptualization and operationalization of leadership ethics will be the source of trust for all related parties. It is corroborated by the findings of the research done by Ponnu and Tennakoon (2009), who discover the positive and significant relation between the leadership ethics and the employees' trust in leadership of the organization. Meanwhile, Mihelič, Lipičnik & Tekavčič (2010) find out that leadership ethics is connected with the trust on the institution and the leader.

Akker, Keres, Lashuizen, & Six (2009); Treviño, Hartman, & Brown (2000); Caldwell, Hayes, Bernal & Karri (2008) and Bello,(2012): Colquit, Scott & Leoine (2007), all propose similar elucidation on the positive connection between the leadership ethics and the trust given, which explain that the ethical culture that is implanted by a leader will improve the employees' trust on their leader and organization. Based on the elucidation, the following hypothesis is formed:

*H<sub>1</sub>. There is a positive effect of leadership ethics on trust in leadership*

### **Leadership ethics and organizational commitment**

Several researches have attested that there is a positive and significant correlation between leadership ethics and commitment. Brown & Treviño (2006) explains that one outcome of leadership ethics is the



improvement of the commitment, motivation, and ethical decision making. Bello (2012) clarifies that leadership ethics influences the commitment of the organization. Leader who continuously behave and act ethically will further encourage the commitment improvement to the organization and the leader.

Schminke, Ambrose, & Neubaum (2005) find in their research findings that the leader's ethics and moral, which is then elaborated in the work ethics, will develop ethical work climate which affect the employees' attitude in the form of commitment to the organization and the leader. Ponnu & Tennakoon (2009) also explain about the presence of the positive and significant relationship between leadership ethics and organizational commitment. Similarly Salem & Agil (2012), and Ruiz & Martinez (2011) expound about the relationship between the management ethics and organizational commitment. Based on the explanation, the following hypothesis is formed:

*H<sub>2</sub>. There is a positive effect of leadership ethics on organizational commitment*

### **Leadership ethics and attitudes toward changes**

From the point of view of organizational change management, the role of leadership ethics is very important. Leadership ethics, which is formulated and well-applied in line with the aspiration of every member of the organization, will become the guideline which determines whether the process of changes will run smoothly or not. It will make the changes of attitude, behavior, and performance run better, more effective, and more efficient. Therefore, the comprehension and application of the leadership ethics will be related to the attitudes of the individual and/or group in encountering the change.

Several research findings show the presence of the effect of the leadership ethics on the attitude toward changes. Among others, it is presented in the research of Savolainen & Fresno (2012) which explains that the presence of employees' trust in leadership will bring innovative behavior. The presence of trust on leader will cause the employees to feel that they get the climate and facilities in developing changes and creativity, since they feel supported by their leader. In their research, Patzer & Voegtlin (2010) explain that leadership ethics become a very strategic element which affects the management of the organization's environmental change in the future. Simić (1998) also adds that leadership ethics, that leads to work ethics especially under transformational leadership behavior, facilitates organizational changes. Pagon, Banutai & Bizjak (2008) explain that ethical skill as one social competency affects the effectiveness of the management of change. James & Schmitz (2011) and Yoesef (2000) elucidate the presence of positive effect of the work ethics on the creativity and innovation as a form of change. Based on the explanation, the following hypothesis is formulated:

*H<sub>3</sub>. There is a positive effect of leadership ethics on attitudes toward changes*

### **Trust in leadership and attitudes toward changes**

According to Peterson (2004) and Miller, Woehr, & Hudspeth (1994) the employees' trust on leader will positively affect their attitudes toward change. Miller et al., stress common values as an important aspect in the existence of employees' trust on the leader, which will affect the application of organizational change process. Meanwhile, based on his research, Robinson (1996) shows that the existence of employees' trust on the leader that will improve employees' obedience to all organizational regulations will affect the implementation

organizational changes and performances. Ben-Gal & Tzafrir (2001) also find the need to establish harmonious relationships between superior and subordinates and between clients and consultants, which improves trust. The trust will, in turn, affect the application of the process of change in an organization. Cordery, Sevastos, Mueller, & Parket (1993) state that the commitment that is built by the presence of trust also affects the organizational change implementation's level of success. Based on the explanation, the following hypothesis is formulated:

*H 4. There is a positive effect of trust in leadership on attitudes toward changes.*

#### **Organizational commitment and attitudes toward changes**

Every employee, especially those who hold the position as the leader of an organization, should feel that he/she is the part of the process of change, starting from the processes of planning, implementing, and managing the changes into the better achievement of the organizational objectives. Ideally, the essence and the orientation of the final objective of each change are the achievement and improvement of the organizational efficiency and effectiveness, as an accumulation of the fulfillment of various interests of each member and/or organizational group. In this case, in their research, Cordery, Sevastos, Mueller, & Parket (1993) explain that there is a positive correlation between the level of commitment of the members of an organization and the way to anticipate the function of flexibility in managing the change.

According to Ben-Gal & Tzafrir (2001) the existence of a high level of commitment including commitment on change brings a positive effect on the expectation for the success of the organizational change implementation. The existence of commitment needs some affecting factors, one of which is the level of subordinates' trust on their leader. Yoesef's (2000) research for various sizes of companies in 30 out of 50 important companies in Arab Emirates find that organizational commitment positively affects the attitude toward change. Based on the explanation, the following hypothesis is formulated:

*H5. There is a positive effect of organizational commitment on attitudes toward changes.*

#### **Trust in leadership and organizational commitment mediate the influence of leadership ethics and the attitudes toward changes.**

Mediation variable means the functioning of ethical leadership on the attitudes toward change variable, which partially or fully has to pass the variables that become mediator variables. Kalshoven & Hartog (2009) explains that trust in leadership mediates the influence of leadership ethics which inspires the growth and development of the work ethics on the leadership effectiveness including the effectiveness in managing the change. It means that the maintenance and improvement of the employees' trust in the leadership bound by work ethics will facilitate the process of change. In their research, Halley & Sidky (2007) explain that leadership ethics that bears work ethics is positively connected with the continuous learning process as the embodiment of change, which stipulates the existence of the mediation of trust and certain commitment

Other researches also demonstrate the occurrence of organizational commitment, which is based on trust, which mediates the effect of Islamic work ethics on the attitudes toward change. They are the researches of Yoesef (2000) and Sri Maryati (2006), who upon studying the employees of Syari'ah and conventional banks in Central Java, explain that affective organizational commitment mediates the relationship between Islamic work

ethics and the attitudes in facing organizational changes. On the ground of these references, the following hypothesis is formulated:

*H6. Trust on leadership mediates the effect of leadership ethics on the attitudes toward changes.*

*H7. Affective commitment mediates the effect of leadership ethics on the attitudes toward changes.*

### III. Research Method

The respondents of this research were 129 permanent teachers who work in Batik Education Foundation of Surakarta, Indonesia. They were chosen using simple random sampling technique, based on the proportional number of teachers in the secondary schools that are managed by that foundation. The data were gathered using questionnaire dissemination using scale 1 (SD=Strongly Disagree) up to 5 (SA= Strongly Agree). Leadership ethics variable was measured based on the opinions of Ponnu & Tennakoon (2009); trust in leadership variable was measured based on the assumptions claimed by Podsakoff, MacKenzie, Moorman, & Fetter (1990); organizational commitment variable was measured using the opinions of Meyer & Allen in Yousef (2000); and attitudes toward changes variable was measured using the assumption claimed by Dunham et al., (1989) in Yousef (2000).

The analysis instrument being employed was hierarchical regression analysis based on the assumptions claimed by Baron and Kenney (1986). It started by simple regressions, executed successively from independent to dependent variables; from independent to mediator variables; and then from mediator to dependent variables. Next, it was followed by regression analysis between the independent variables by putting in mediator variable to the dependent variable.

### IV. Conclusions

Descriptively, the majority of the research subjects was consisted of 58.6% male and 41.4% female and in the age span of 41-50 year old (34.1%); of 31-40 year old (29.4 %), and the rest were below 30 year old (19.4%) and above 50 year old (17 %). The majority had the education of S1 graduate/undergraduate program (81.4%) and S2 graduate/ graduate program (18.6%). Their length of work varied, the longest was between 16-20 years (38.7%); between 11-15 years (28.7 %), and the rest were under 10 years and above 20 years, 16.3% each.

The questionnaire items of all research variables were deemed valid, since their r product moment value was above 0.164. The reliability test shows that all variables were reliable, since their CA > 0.6. The average score of each research variable is relatively still in the medium level, because they are between the scale of 3 and 4 (3.5) of the maximum score of 5, so that it can still need to be improved. The inter-correlation also shows the signification levels, from low to medium. Moreover, the result of the classical assumption test all fulfills the requirement to be employed in hierarchical regression analysis.

**Table 1 : The Result of Hierarchical Regression Test**

Model			Sig	Remarks: EL=Ethical Leadership
	B	t		

1.1	EL-TIL	0.405	4.987	<0.001	TIL= Trust In Leadership OC=Organizational Commitment AC=Attitude toward Change	
1.2	EL-OC	0.280	3.265	<0.001		
1.3	EL'AC	0.559	7.597	<0.001		
1.4	TIL-AC	0.376	4.579	<0.001		
1.5	OC-AC	0.459	5.822	<0.001		
				$\beta$	T	Sig
1.6	EL + TIL- AC	EL-AC TIL-AC	0.486 0.180	6.142 2.268	<0.001 <0.001	
1.7	EL + OC-AC	EL-AC OC-AC	0.467 0.328	6.563 4.613	<0.001 <0.001	

The summary of the hierarchical test can be observed in Table 1. The results show that all 7 (seven) formulated hypotheses are accepted, and are concisely explained in the following discussion

### Discussion

1. EL has a positive effect on TIL, which means that Hypothesis 1 is verified, since the  $\beta$  coefficient =0,405, with the t value =4.987, and the  $p$  value <0.001. Thus it can be presumed that the school principal's ethical leadership directly affects the teachers' trust on the school principal. This finding corroborates the findings of several previous studies, for instances the studies executed by: Tennakoon. (2009); Caldwell, Hayes, Bernal, & Karri (2008); Bello (2012)
2. EL has a positive effect on OC, which means that Hypothesis 2 is verified, since the  $\beta$  coefficient =0.280, with the t value =3,265, and the  $p$  value <0.001. Thus it can be presumed that the school principal's ethical leadership directly affects the teachers' commitments in performing their tasks and functions. This finding confirms the findings of several previous studies, for instances the studies executed by: Brown & Trevino (2006); Ponnu & Tennakoon (2009); Bello (2012); Colquitt, Scott, & Leoine (2007).
3. EL has a positive effect on AC, which means that Hypothesis 3 is verified, since the  $\beta$  coefficient =0.559, with the t value =7.597, and the  $p$  value <0.001. Thus it can be presumed that the school principal's ethical leadership directly affects the teachers' attitudes toward changes in performing their tasks and functions. This finding confirms the findings of several previous studies, such as those of: Savolainen & Fresno (2012); Patzer & Voegtlin (2010); Pagon, Banutai, & Bizjak (2008); James & Schmitz (2011)
4. TIL has a positive effect on AC, which means that Hypothesis 4 is verified, since the  $\beta$  coefficient =0.376, with the t value =4.579, and the  $p$  value <0.001. Therefore, it can be presumed that the teachers' trust influences the attitudes toward changes. This finding corroborates the findings of several previous studies, for instances the studies executed by: Peterson (2004); Miller, Woehr, & Hudspeth (1994); Robinson (1996); Ben-Gal & Tzafrir (2001); Van Zyl & Lazeny (2002)
5. OC has a positive effect on AC, which means that Hypothesis 5 is verified, since the  $\beta$  coefficient =0.459, with the t value =5.822, and the  $p$  value <0.001. Therefore, it can be presumed that the teachers' commitment influences the attitudes toward changes. This finding is in line with the findings of several previous studies, for instances the studies executed by: Ben-Gal & Tzafrir (2001) and Yoesef (2000)
6. TIL partially mediates the effect of EL on AC, which means that Hypothesis 6 is verified, since the  $\beta$  coefficient =0.486, with the t value = 6.142, and the  $p$  value <0.001, for the influence of EL on AC; and the

$\beta$  coefficient = 0.180, with the  $t$  value = 2.268, and the  $p$  value <0.001 for the influence of TIL on AC. Therefore, it can be presumed that the influence of EL on AC should pass through TIL although the influence of EL on AC is still significant, albeit with lower significance level. This finding confirms the findings of several previous studies, such as the findings of: Ben-Gal & Tzafrir (2001); Yoesef (2000).

7. OC partially mediates the effect of EL on AC, which means that Hypothesis 7 is verified, since the  $\beta$  coefficient = 0.467, with the  $t$  value = 6.563, and the  $p$  value <0.001 for the influence of EL on AC; and the  $\beta$  coefficient = 0.328, with the  $t$  value = 4.613, and the  $p$  value <0.001 for the influence of OC on AC. Therefore, it can be presumed that the influence of EL on AC should pass through TIL although the influence of EL on AC is still significant, albeit with lower significance level. This finding confirms the findings of several previous studies, such as the findings of: Halley & Sidky (2007); Ben-Gal & Tzafrir (2001); Yoesef (2000)

Even though all research hypotheses are verified, some problems are still present. It is indicated, among others, by the fact that the perception levels of the research subjects to all four relative variables still need to be improved, especially the ethical leadership variable. Of the maximum scale measurement of 5 (five), the teachers' perception ranged between 3 to 4 (3.27 for AC; 3.46 for TIL; 3.52 for OC; and 3.60 for EL). Also, it would be better if the conceptualization and operationalization of the commitment and attitudes toward changes variables are divided into cognitive, affective, and behavioral trend. Ideally, all three components of commitment and the attitudes in encountering the changes are congruent. In the future, various researches and alternative studies are required to discover the way to maintain all four variables so that they all fulfill the criteria, both based on leadership ethics and for the improvement objective as opined by Brown & Tervino (2006).

## Conclusion

The school principal's ethical leadership positively influences the teachers' trust on their leader and their organizational commitment. In addition, the school principal's ethical leadership also directly and indirectly affects the teachers' attitudes toward changes. The indirect influence is determined by considering the influence of the school principal's ethical leadership, in order to discover the extent of its ability to foster the teachers' commitment and trust.

The existence of partial mediation influence, through the trust on the school principal and through the teachers' commitment, demonstrates that the school principal and the teachers, as an individual as well as a team, should always develop reciprocal and harmonious interconnection based on higher importance. The school principal should continuously guarantee the stamina of the teachers' trust and commitment, and then they should jointly proceed in the process to make relevant changes in order to achieve the educational organization's objectives in educating the nation.

## Limitation

The perception to assess the principal's ethical leadership, trust in leadership, commitment on toward change, is limited to one point of time. The leadership system and the structure in private secondary schools are also lack of reference to the professional judgment as well as orientation to the sustainable leadership relay development of the future. The dynamics of the leadership in private secondary schools are still imbued with

the interest of specific party (ies). Future research in leadership ethics, trust, commitment, and attitudes toward changes should be well advised to be based on specific time span and on the leader that can be employed to determine the tendency representing relevant phenomena. Future research should also input certain situational variables, such as the principal electoral system in secondary school, especially in private institution, to find out whether it is already based on and oriented to ethical criteria.

The research findings bring managerial implications for the managers of the Batik Education Foundation of Surakarta and for the managers of secondary schools in general, to always behave ethically in making any decision which becomes their direct responsibility, with the board of teachers, the staffs, and other stakeholders. It implicates the secondary school managers to proactively standardize the ethical behavior, and to invite all related members of institution to behave ethically as well.

In the theoretical world, seen from the diversities of the variables, both the ones that influence and the ones that are influenced, this research findings inspire the development of the conceptualization and operationalization of the ethical leadership of school principals in secondary school. It is relevant to conduct meta-analysis on several researches concerning ethical leadership of the principal of secondary school, including the possibility to consider mediator, moderator, and/or control variables.

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# Environmental management and environmental investment: Considering the effect of board governance

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## Abstract

Managers often cut down the environmental investment to achieve earnings manipulation. Moreover, the board bears the responsibility of monitoring managers and the board independence is essential to the implementation of environmental investment. This study aims to examine the impact of environmental management on environmental investment under the board monitoring mechanism. This study chooses Taiwan's listed and OTC companies in the Gas and Electricity Industry, Chemical Industry, Steel Industry, Semi-conductor Industry and Optoelectronics Industry, to perform an investigation using questionnaire. The empirical results find that when the board size is larger and CEO duality is present, environmental investment is less likely to gain support when implementing environmental management. In addition, this study also finds that when board ownership is higher, environmental investment is more likely to gain support when engaging in environmental management.

**Keywords:** environmental management, environmental investment, board of directors, corporate governance

## I. Introduction

During the process of production, businesses are likely to neglect the environmental carrying capacity and the balance between economic growth and environmental protection. The living and development of human are therefore facing a potential threat (Minoli and Bell, 2003). Since environmental pollution mainly resulted from industrial development, the public demands and expects companies to engage in environmental protection for the sustainability of society. Governments of many countries use regulations and incentives pushing companies to develop environmental management systems (Klassen and McLaughlin, 1996). Environmental management is a managerial tool to help companies implement environmental protection measures, which will lower and control environmental risk. Under the increasingly strict environmental regulations, companies not only can

meet the requirement of laws, but also establish a good corporate image, helping the sustainable development of companies. The objective of business operation is to maximize shareholders' profit. Under the separation of ownership and control, due to self-interest, limited rationality and risk aversion (Eisenhardt, 1989), managers may not follow the principle of maximizing shareholders' value (Haniffa and Hudaib, 2006). Therefore, owners of the company authorize the board of directors with managerial monitoring mechanisms (Daily, Dalton and Cannella, 2003) to ensure the rights of shareholders. When creating the maximizing profits for shareholders, companies are asked to consider their impact on the society at the same time. Corporate governance starts to combine with social issues of environmental and climatic change, labor rights, and corruption (Walls, Berrone and Phan, 2012). The research in the relationship between environmental management and corporate governance starts to gain attention.

An environmental management system is the procedure of planning, implementing and controlling, which helps companies to examine and improve environmental policies and processes as scheduled. Active environmental management should be able to improve environmental protection performance (Klassen and Whybark, 1999), however, which is not empirically supported (Lee and Rhee, 2007). This seemingly contradictory result comes from environmental investment (Ates, Bloemhof, Raaij and Wynstra, 2012 ; Bansal and Gao, 2008). Normally, environmental investment decreases the short-term performance (Hart and Ahuja, 1996; Sarkis and Cordeiro, 2001), and managers tend to reduce environment investment to manipulate profits. The supervision of the board of directors is hence playing an essential role in the realization of environment investment. As a result, this study intends to examine the relationship between environmental management and environmental investment, while taking into consideration of the effect of board governance. This study claims that companies should gain support from the board of directors to increase environmental investment and hence improve the environmental performance when engaging in environmental management. This study targets the potential polluters in the Regulations Governing Collection of Soil and Groundwater Pollution Remediation Fees. Questionnaires distributed to listed companies in the Gas and Electricity Industry, Chemical Industry, Steel Industry, Semi-conductor Industry and Optoelectronics Industry, are combined with corporate governance database to examine the interaction between environmental management and corporate governance mechanism. Since operation performance is usually regarded as an indicator of managerial ability (Tuggle, Sirmon, Reutzel and Bierman, 2010), managers tend to reduce environmental expenditures to beautify the performance when facing profit pressure. Findings from this study will help to ascertain the relationship between corporate governance and environmental social responsibility. In addition, environmental management aims to enhance environmental performance; however, the relationship between them is insignificant (Ates et al., 2012; Lee and Rhee, 2007). This study will affirm the role or environmental investment as the intermediary factor between environmental management and environmental performance.

## **II. Main Body**

### **Literature Reviews**

Environmental management is a managerial tool to help companies continuously improve environmental

protection measures. Through procedures such as plan, implement, and control, companies will be able to lower and control environmental risk. Proactive environmental management means that organizations should make commitment to improve ecological environment through innovative management and establishment of order, but not to be limited to the requirement of regulation (Hart, 1995). Companies with proactive environmental management are willing to take actions beyond regulations (Darnall, Henriques and Sadorsky, 2010), and they can create new market opportunities through innovation of environmental technology and improvement of corporate image. However, in order to be environment-friendly, companies usually need to undertake various environmental investments. That is, the practice of environmental policies usually requires the injection of funds (Ates et al., 2012; Bansal and Gao, 2008). Its benefits might not be shown in the short term, but its uncertainty might be increased (Aragon-Correa, 1998; Aragon- Correa and Sharma, 2003; Hart, 1995; Khanna and Damon, 1999). However, the recent trend of corporate governance starts to consider the relationship between businesses and the society, and claims that companies should take account of their impact on the society when creating the maximizing profits for shareholders (Walls, Berrone and Phan, 2012), and should integrate environmental, social, and managerial responsibility into their goal of performance and sustainable operation (Blesener, Cruz-Osorio, Gardinerm and Germanova, 2009; Escudero, Power, Waddock, Beamish and Cruse, 2010; Mackenzie and Hodgson, 2005; Tonello, 2010).

In 1999, OECD proposed the Principles of Corporate Governance, which defines corporate governance as a managerial and controlling system for companies, and the allocation of responsibility and power among board of directors, managers, shareholders, and other stakeholders. The most important tasks of the board of directors are representing shareholders to monitor the behavior and performance of managers, preventing the agency problem, protecting shareholders' benefits, and maximizing the long-term profits of companies (Dalton and Cannella, 2003). Although some studies confirm that engaging in environmental management helps companies increase long-term economic performance (King and Lenox, 2002; Klassen and McLaughlin, 1996; Montabon, Sroufe and Narasimhan, 2007; Wahba, 2008), some articles also indicates that environmental investment results in the decline of short-term performance (Hart and Ahuja, 1996; Sarkis and Cordeiro, 2001). To prevent managers from pursuing short-term performance, reducing environmental investment, and manipulating earnings, the relationship between corporate governance and environmental management will become increasingly closer. This study aims to explore the monitoring role of board of directors in the relationship between environmental management and environmental investment. Related articles mostly use board structure as the proxy variable of board independence or monitoring efficiency (Combs, Ketchen, Perryman and Donahue, 2007; Jackling and Johl, 2009), and mainly examine the impact of board size, percentage of outside directors, CEO duality, and board ownership. The study will also develop following hypotheses according to these indicators.

**H1: When the board size is larger, the relationship between corporate environmental management and environmental investment tends to be positive.**

**H2: When the percentage of outside directors is higher, the relationship of corporate environmental management and environmental investment tends to be positive.**

**H3: When CEO duality is present, there is a negative relationship between corporate environmental**

management and environmental investment.

**H4: When board ownership is higher, the relationship between corporate environmental management and environmental investment tends to be positive.**

### III. Method

This study chooses Taiwanese listed and OTC companies in the Gas and Electricity Industry, Chemical Industry, Steel Industry, Semi-conductor Industry and Optoelectronics Industry as investigating targets. The population of this study is companies contained in TEJ database. 452 questionnaires are sent out by mail to the person in charge in the company. This study aims to explore the relationship between environmental management and environmental investment under the board governance. Therefore, the dependent variable used in this study is environmental investment, which is the expenditure for protecting environmental resources and controlling environmental pollution. A 5-point Likert scale is utilized in this study to evaluate whether companies continue increasing the investment of environmental protection measures (Zhu and Sarkis, 2004), and 5 to 1 points are assigned accordingly based on 5 scales of strongly agree, agree, neutral, disagree, and strongly disagree. In addition, this study rests on the standard of ISO14001 and refers to the items adopted in related literature of environmental management (Ates et al, 2012; Buysse and Verbeke, 2003; Lindgreen, Swaen and Johnston, 2009). This study aims to examine the impact of board size, percentage of outside directors, CEO duality, and board ownership on environmental management and environmental investment. To reduce the influence of non-research variables on the established model, in addition to controlling the impact of size, age, managerial ownership, and debt ratio, this study also controls the impact of industries and years. Four dummy variables are used to account for the industry effect and Chemical Industry is chosen as the comparable item.

Based on the developed hypotheses, the empirical model is set up as Equation (1).

$$\begin{aligned}
 EI_{it} = & \beta_0 + \beta_1 EM_{it} + \beta_2 BoardSize_{it} + \beta_3 Independent_{it} + \beta_4 Duality_{it} + \beta_5 Ownership_{it} \\
 & + \beta_6 EM_{it} \cdot BoardSize_{it} + \beta_7 EM_{it} \cdot Independent_{it} + \beta_8 EM_{it} \cdot Duality_{it} + \beta_9 EM_{it} \cdot Ownership_{it} \\
 & + \sum \gamma_j Control_{jit} + \varepsilon_{it} \dots\dots
 \end{aligned} \dots(1)$$

In Equation (1), dependent variable is environmental investment (EI). EM measures the involvement of environmental management. BoardSize is the size of the board. Duality is CEO duality. Independent is the ratio of outside directors. Ownership is the board ownership. Besides, Control are the control variables, including corporate size (Size), corporate age (Age), debt ratio (Slack), managerial ownership (Insider), sub-industries and years. The descriptive statistics of research variables are presented in Table 1. In addition, Table 2 displays the correlation coefficient matrix of explanatory variables. The analytical results show that the highest correlation coefficient among independent variables is 0.583, which is within the acceptable range.

Table 1 Descriptive Statistics

Variable		Min. Value	Max. Value	Mean	S.D.
Environmental Investment	<i>EI</i>	1.000	5.000	3.577	0.858
Corporate Age	<i>Age</i>	4.000	58.000	21.827	12.697

Corporate Size*	<i>Size</i>	18.028	26.605	21.732	1.436
Debt Ratio %	<i>Slack</i>	6.030	96.970	39.002	18.438
Environmental Management†	<i>EM</i>	-3.426	1.546	0.000	1.000
Managerial Ownership %	<i>Insider</i>	0.000	14.680	1.586	2.698
Board Size‡	<i>BoardSize</i>	-1.667	4.302	0.000	1.000
Outside Directors	<i>Independent</i>	-1.801	2.910	0.000	1.000
CEO Duality	<i>Duality</i>	0.000	1.000	0.315	0.466
Board Ownership	<i>Ownership</i>	-1.432	4.072	0.000	1.000
Effective Sample	168				

\*Size is measured by the natural logarithm of net sales. †Environmental management is the standardized factor score. ‡Board size, outside directors, and board shareholding ratio are all standardized.

Table 2 Correlation Coefficient

	1	2	3	4	5	6	7	8	9
1 <i>EI</i>									
2 <i>Age</i>	.041								
3 <i>Size</i>	.223	.140							
4 <i>Slack</i>	-.007	.099	.254						
5 <i>Insider</i>	-.157	-.084	-.253	-.217					
6 <i>EM</i>	.771	.072	.191	.003	-.060				
7 <i>BoardSize</i>	.076	.020	-.037	-.027	.037	.192			
8 <i>Independent</i>	.019	-.282	-.090	-.191	.098	.116	.583		
9 <i>Duality</i>	-.114	-.024	-.229	-.097	.038	-.141	-.208	.018	
10 <i>Ownership</i>	.203	-.020	-.067	.009	-.073	.225	.066	.065	-.040

This study uses a multiple regression model to examine the relationship among environmental management, board governance, and environmental investment and test the research hypotheses. The empirical results are presented in Table 3. Model 1 is the basic model established using controlling variables. Model 2 examines the main effect of environmental management and board governance. Model 3 includes the cross term to examine the moderating effect of board governance. The results indicate higher R<sup>2</sup> and adjusted R<sup>2</sup> compared with other models. This study aims to examine the impact of the board's monitoring mechanism on environmental management and environmental investment. Hypothesis 1 forecasts that when the board size is larger, environmental management tends to have a positive impact on environmental investment. The empirical results show that the cross term of environmental management and board size ( $EM \times BoardSize$ ) has a negative impact on environmental investment. That means the larger the board size is, the less support the environmental investment gains when companies are performing environmental management. Therefore, Hypothesis 1 does not gain support. Next, Hypothesis 2 infers that when the ratio of outside directors is higher, the objectivity of the board can be strengthened. The empirical results indicate the cross term of environmental management and outside directors is significantly positive. That is, Hypothesis 2 is supported. In addition, Hypothesis 3 claims

that CEO duality plays the roles of decision-implementer and decision-monitor at the same time, which makes the board lose objectivity and independence, and tend to cut down the environmental investment with no immediate returns (Hart and Ahuja, 1996; Sarkis and Cordeiro, 2001). The empirical results show that the cross term of environmental management and CEO duality ( $EM \times Duality$ ) is negative and significant at the 0.1 level. That is, Hypothesis 3 gains support. Hypothesis 4 forecasts that when board ownership is higher, the relationship between environmental management and environmental investment can be positively strengthened. However, the empirical results indicate that the cross term of environmental management and board ownership ( $EM \times Ownership$ ) is positive but not significant. That is, Hypothesis 4 does not gain support. Last, the analytical results of controlling variables indicate a significantly positive relationship between corporate size and environmental investment. That is, when the sales size is larger, the company is more likely to increase environmental investment. When the debt ratio is higher, meaning the company has a higher financial pressure, it is less likely to increase environmental investment. When managerial ownership is higher, it is less likely to support the environmental investment with no immediate returns. Moreover, this study uses Petrochemical Industry as the comparable industry, and the empirical results show that companies in Steel Industry are more willing to engage in environmental investment than companies in Petrochemical Industry.

Table 3 Empirical Models

	Model 1	Model 2	Model 3
$EM \times BoardSize$			-.147 *
$EM \times Independent$			.222 ***
$EM \times Duality$			-.115 *
$EM \times Ownership$			.068
$EM$		.744 ***	.809 ***
$BoardSize$		-.019	.047
$Independent$		-.041	-.083
$Duality$		.007	-.005
$Ownership$		.033	-.007
$Age$	-.110	-.084	-.072
$Size$	.178 **	.066	.097 *
$Slack$	-.101	-.066	-.090 *
$Insider$	-.108	-.099 *	-.099 **
$Industry1 *$	.290 ***	.160 **	.192 ***
$Industry2$	.133	.029	.036
$Industry3$	-.033	.051	.087
FValue	3.726 ***	22.415 ***	18.601 ***
R Square	.140	.634	.663
Adj. R Square	.103	.606	.628
N	168	168	168

\*\*\*:  $p \leq 0.01$ , \*\*:  $p \leq 0.05$ , \*:  $p \leq 0.1$

\* *Industry1~ Industry3* are Steel Industry, Semi-conductor Industry and Optoelectronics Industry, respectively

#### IV. Conclusions

##### Results

This study aims to explore the relationship between environmental management and environmental investment, with the board monitoring effectiveness as the contingency factor. Empirically, this study chooses Oil, Gas and Electricity Industry, Chemical Industry, Steel Industry, Semi-conductor Industry, and Optoelectronic Industry as investigating targets. The population of this study is the listed and OTC companies in the five biggest potential polluting industries collected from TEJ database. 452 questionnaires are sent out by mail and 168 returned effective questionnaires are used for empirical analyses. The analytical results find that when board size is larger and CEO duality is present, environmental investment is less likely to gain support. In addition, the research results also find that when there are outside directors, companies tend to support environmental investment when engaging in environmental management. It is certain that the board's monitoring mechanism has a moderating effect on the relationship between environmental management and environmental investment. Through additional analyses, the relationship between environmental investment and environmental performance is also confirmed.

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# Improved GMM Approaches to Structural Equation Models with Heteroskedasticity of Unknown Form

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## **Abstract**

For the sake of both efficiency and robustness, the generalized method of moment (GMM) approach developed by Hansen (1982) has become one of the most commonly used techniques for finance studies. However, many studies mention the finite sample deficiencies of GMM. On the other hand, to investigate some finance issues about the relationship among financial variables or factors involving unobservable concepts, the structural equation models (SEM) can be a popular way for model specification. Nevertheless, when facing heteroskedasticity of unknown form in the SEM, the practical remedies mainly rely on a naive correction of White's (1980) HCCME. Hence, this study tries to link GMM and SEM, and to develop the finite sample refined GMM for SEM under heteroskedasticity of unknown form.

Specifically, in this article, we first extend the applicability of various versions of HCCMEs by introducing the improved standard errors of TSLS (two-stage least squares) for SEM which consider the impacts of high leverage points and the maximum leverage points. Second, we reformulate the SEM in a GMM framework to accommodate to Lin and Chou's (2013) quasi-hat matrix corrections. By combining alternative sources of bias reduction, we further propose an improved CUE (continuously updating estimator) approach for SEM under heteroskedasticity of unknown form. Finally, in terms of Monte Carlo experiments, we demonstrate the small-sample improvement of those modifications for statistical inference.

**Keywords:** HCCME, generalized method of moment, structural equation model

# Ranking Alternatives by a Relative Maximizing Set and Minimizing Set Method under Fuzzy Multiple Criteria Decision Making Environment

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## Abstract

A relative maximizing set and minimizing set method is suggested to rank alternatives under fuzzy multiple criteria decision making (MCDM) environment, where ratings of alternatives versus qualitative criteria as well as importance weights of all criteria are assessed in linguistic values represented by fuzzy numbers. Membership functions of the final fuzzy evaluation values of alternatives can be developed. Final fuzzy evaluation values can be defuzzified via suggested ranking method and formulae of ranking procedure can be clearly produced. A numerical example demonstrates feasibility of the suggested method.

**Keywords:** Relative maximizing set and minimizing set, Fuzzy MCDM, Ranking

## I. Introduction

Fuzzy multiple criteria decision making (MCDM) (Chen & Hwang, 1992) has been widely applied to resolve many problems under multiple criteria and uncertain environments. Some recent works and applications in fuzzy MCDM can be seen in (Akdag, et al., 2014; Ghorbani, et al., 2013). The final evaluation values of alternatives in the above works are usually fuzzy numbers and a proper ranking method is usually needed to defuzzify these final fuzzy evaluation values into crisp values to assist in decision making. However, formulae for the membership functions of final fuzzy evaluation values of alternatives in the above fuzzy MCDM works cannot be seen. In the suggested fuzzy MCDM model, ratings of alternatives versus qualitative criteria and the importance weights of all criteria are assessed in linguistic values (Zadeh, 1975) represented by triangular fuzzy numbers. Formulae for the membership functions of final fuzzy evaluation value of each alternative can be derived via interval arithmetic operations and  $\alpha$ -cuts of fuzzy numbers. Because the produced final evaluation values of alternatives are still fuzzy numbers, a ranking method is needed to defuzzify them into crisp values to assist in decision making.

Since fuzzy set theory was introduced by Zadeh in 1965, numerous approaches in ranking fuzzy numbers have been proposed. A review and comparison of many of these ranking approaches can be found in Wang & Kerre (2001). Moreover, some recent works can be seen in (Hari Ganesh & Jayakumar, 2014; Rao & Shankar,

2013). Despite the advantages, some of the above approaches are computational complex, and others are difficult to display connection between the ranking procedure and the final fuzzy evaluation values of alternatives under fuzzy MCDM environment. In order to resolve the above mentioned limitations, this work suggests a relative maximizing set and minimizing set method to rank alternatives under fuzzy MCDM. The suggested method is an improvement of the one from Chen (1985). The relative maximizing set and minimizing method is used to defuzzify the final fuzzy evaluation values in order to rank alternatives for assisting in decision making. Formulae of ranking procedure can be clearly presented for more efficient applicability. Finally a numerical example is used to demonstrate feasibility of the suggested method.

## II. Fuzzy Set Theory

### 2.1. Fuzzy Sets

$A = \{ (x, f_A(x)) \mid x \in U \}$  where  $U$  is the universe of discourse,  $x$  is an element in  $U$ ,  $A$  is a fuzzy set in  $U$ ,  $f_A(x)$  is the membership function of  $A$  at  $x$  (Kaufmann & Gupta, 1991). The larger  $f_A(x)$ , the stronger the grade of membership for  $x$  in  $A$ .

### 2.2. Fuzzy Numbers

A real fuzzy number  $A$  is described as any fuzzy subset of the real line  $R$  with membership function  $f_A$  which possesses the following properties (Dubois & Prade, 1978): (a)  $f_A$  is a continuous mapping from  $R$  to  $[0,1]$ ; (b)  $f_A(x) = 0, \forall x \in (-\infty, a]$ ; (c)  $f_A$  is strictly increasing on  $[a, b]$ ; (d)  $f_A(x) = 1, x \in [b, c]$ ; (e)  $f_A$  is strictly decreasing on  $[c, d]$ ; (f)  $f_A(x) = 0, \forall x \in [d, \infty)$ , where  $a \leq b \leq c \leq d$ ,  $A$  can be denoted as  $[a, b, c, d]$ . The membership function  $f_A$  of the fuzzy number  $A$  can also be expressed as:  $f_A(x) = f_A^L(x)$  if  $a \leq x \leq b$ ;  $f_A(x) = 1$  if  $b \leq x \leq c$ ;  $f_A(x) = f_A^R(x)$  if  $c \leq x \leq d$ , where  $f_A^L(x)$  and  $f_A^R(x)$  are left and right membership functions of  $A$ , respectively. A fuzzy triangular number can be denoted as  $(a, b, c)$ .

### 2.3. $\alpha$ -Cuts

The  $\alpha$ -cuts of fuzzy number  $A$  can be defined as  $A^\alpha = \{x \mid f_A(x) \geq \alpha\}$ ,  $\alpha \in [0, 1]$ , where  $A^\alpha$  is a non-empty bounded closed interval contained in  $R$  and can be denoted by  $A^\alpha = [A_l^\alpha, A_u^\alpha]$  (Kaufmann & Gupta, 1991).

### 2.4. Arithmetic Operations on Fuzzy Numbers

Given fuzzy numbers  $A, B \in R^+$ ,  $A^\alpha = [A_l^\alpha, A_u^\alpha]$ ,  $B^\alpha = [B_l^\alpha, B_u^\alpha]$ . By interval arithmetic, some main

operations of  $A$  and  $B$  can be expressed as follows (Kaufmann & Gupta, 1991):

$$(A \oplus B)^\alpha = [A_l^\alpha + B_l^\alpha, A_u^\alpha + B_u^\alpha] \quad (1)$$

$$(A \ominus B)^\alpha = [A_l^\alpha - B_u^\alpha, A_u^\alpha - B_l^\alpha] \quad (2)$$

$$(A \otimes B)^\alpha = [A_l^\alpha \cdot B_l^\alpha, A_u^\alpha \cdot B_u^\alpha] \quad (3)$$

### III. Model Establishment

Suppose that there are  $k$  decision makers  $D_t, t=1,2,\dots,k$  who are responsible for evaluating  $m$  alternatives  $A_i, i=1,2,\dots,m$  under  $n$  criteria  $C_j, j=1,2,\dots,n$ . Criteria are divided into three categories as benefit qualitative criteria,  $C_j, j=1,\dots,g$ , benefit quantitative criteria,  $C_j, j=g+1,\dots,h$ , and cost quantitative criteria,  $C_j, j=h+1,\dots,n$ .

#### 3.1 Average ratings of each alternative

Let  $x_{ijt} = (a_{ijt}, b_{ijt}, c_{ijt}), i=1,\dots,m, j=1,\dots,n, t=1,\dots,k$ , be the rating assigned to alternative  $A_i$  under criterion  $C_j$  by decision maker  $D_t$ . Aggregated ratings  $x_{ij} = (a_{ij}, b_{ij}, c_{ij})$  is :

$$x_{ij} = \left(\frac{1}{k}\right) \otimes (x_{ijt} \oplus \dots \oplus x_{ijt} \oplus \dots \oplus x_{ijk}) \text{ where } a_{ij} = \sum_{t=1}^k \frac{a_{ijt}}{k}, b_{ij} = \sum_{t=1}^k \frac{b_{ijt}}{k}, c_{ij} = \sum_{t=1}^k \frac{c_{ijt}}{k}. \quad (4)$$

#### 3.2 Average weights of importance

Let  $w_{jt} = (d_{jt}, e_{jt}, f_{jt}), w_{jt} \in R^+, j=1,\dots,n, t=1,\dots,k$ , be weights assigned by decision maker  $D_t$  to criterion  $C_j$ .  $w_j$  is averaged weight of  $C_j$  assessed by  $k$  decision-makers.

$$w_j = \left(\frac{1}{k}\right) \otimes (w_{j1} \oplus \dots \oplus w_{jt} \oplus \dots \oplus w_{jk}), \text{ where } d_j = \sum_{t=1}^k \frac{d_{jt}}{k}, e_j = \sum_{t=1}^k \frac{e_{jt}}{k}, f_j = \sum_{t=1}^k \frac{f_{jt}}{k}. \quad (5)$$

#### 3.3 Normalize Performance of Alternatives

Suppose  $j = (g+1) \sim n$ , then  $x_{ij}$  should be normalized. The normalization is completed by an approach from Chu & Lin (2009), which preserves the property where the ranges of normalized triangular fuzzy numbers

belong to  $[0,1]$ . Suppose  $x_{ij} = (o_{ij}, p_{ij}, q_{ij})$  is the value of an alternative  $A_i, i=1,2,\dots,m$ , versus a benefit criterion or a cost criterion. The normalized value  $r_{ij}$  can be denoted as:

$$r_{ij} = \left( \frac{o_{ij} - o_j^*}{s_j^*}, \frac{p_{ij} - o_j^*}{s_j^*}, \frac{q_{ij} - o_j^*}{s_j^*} \right), j \in \text{Benefit}, \quad r_{ij} = \left( \frac{q_j^* - q_{ij}}{s_j^*}, \frac{q_j^* - p_{ij}}{s_j^*}, \frac{q_j^* - o_{ij}}{s_j^*} \right), j \in \text{Cost} \quad (6)$$

where  $o_j^* = \min_i o_{ij}, q_j^* = \max_i q_{ij}, s_j^* = q_j^* - o_j^*, i=1,\dots,m, j=g+1,\dots,n. r_{ij} = (a_{ij}, b_{ij}, c_{ij})$ .

### 3.4 Aggregate the weighted ratings

The membership function  $T_i$ ,  $i=1, \dots, n$ , of the final fuzzy evaluation value of each alternative can be denoted as Eq. (7).

$$T_i = \frac{1}{g} \sum_{j=1}^g (w_j \otimes r_{ij}) + \frac{1}{h-g} \sum_{j=g+1}^h (w_j \otimes r_{ij}) - \frac{1}{n-h} \sum_{j=h+1}^n (w_j \otimes r_{ij}) \quad (7)$$

Suppose:  $A_i = A_{i1} + A_{i2} - C_{i3}$ ,  $B_i = B_{i1} + B_{i2} - D_{i3}$ ,  $C_i = C_{i1} + C_{i2} - A_{i3}$ ,  $D_i = D_{i1} + D_{i2} - B_{i3}$ ,

$O_i = O_{i1} + O_{i2} - Q_{i3}$ ,  $P_i = P_{i1} + P_{i2} - P_{i3}$ ,  $Q_i = Q_{i1} + Q_{i2} - O_{i3}$ .

$$A_{i1} = \frac{1}{g} \sum_{j=1}^g (e_j - d_j)(b_{ij} - a_{ij}), A_{i2} = \frac{1}{h-g} \sum_{j=g}^h (e_j - d_j)(b_{ij} - a_{ij}), A_{i3} = \frac{1}{n-h} \sum_{j=h}^n (e_j - d_j)(b_{ij} - a_{ij})$$

$$B_{i1} = \frac{1}{g} \sum_{j=1}^g [a_{ij}(e_j - d_j) + d_j(b_{ij} - a_{ij})], B_{i2} = \frac{1}{h-g} \sum_{j=g}^h [a_{ij}(e_j - d_j) + d_j(b_{ij} - a_{ij})], B_{i3} = \frac{1}{n-h} \sum_{j=h}^n [a_{ij}(e_j - d_j) + d_j(b_{ij} - a_{ij})],$$

$$D_{i3} = \frac{1}{n-h} \sum_{j=h}^n [c_{ij}(e_j - f_j) + f_j(b_{ij} - c_{ij})]$$

$$C_{i1} = \frac{1}{g} \sum_{j=1}^g (b_{ij} - c_{ij})(e_j - f_j), C_{i2} = \frac{1}{h-g} \sum_{j=g}^h (b_{ij} - c_{ij})(e_j - f_j), C_{i3} = \frac{1}{n-h} \sum_{j=h}^n (b_{ij} - c_{ij})(e_j - f_j)$$

$$D_{i1} = \frac{1}{g} \sum_{j=1}^g [c_{ij}(e_j - f_j) + f_j(b_{ij} - c_{ij})], D_{i2} = \frac{1}{h-g} \sum_{j=g}^h [c_{ij}(e_j - f_j) + f_j(b_{ij} - c_{ij})],$$

$$O_{i1} = \frac{1}{g} \sum_{j=1}^g a_{ij}d_j, O_{i2} = \frac{1}{h-g} \sum_{j=g}^h a_{ij}d_j, O_{i3} = \frac{1}{n-h} \sum_{j=h}^n a_{ij}d_j, P_{i1} = \frac{1}{g} \sum_{j=1}^g b_{ij}e_j, P_{i2} = \frac{1}{h-g} \sum_{j=g}^h b_{ij}e_j, P_{i3} = \frac{1}{n-h} \sum_{j=h}^n b_{ij}e_j$$

$$Q_{i1} = \frac{1}{g} \sum_{j=1}^g c_{ij}f_j, Q_{i2} = \frac{1}{h-g} \sum_{j=g}^h c_{ij}f_j, Q_{i3} = \frac{1}{n-h} \sum_{j=h}^n c_{ij}f_j.$$

Via Eqs. (1)-(3) and the above assumptions,  $T_i = (O_i, P_i, Q_i, A_i, B_i, C_i, D_i)$  can be produced as:

$$f_{T_i}^L = \frac{-B_i + [B_i^2 + 4A_i(x - O_i)]^{1/2}}{2A_i}, O_i \leq x \leq P_i, i = 1 - m, \quad (8)$$

$$f_{T_i}^R = \frac{-D_i - [D_i^2 + 4C_i(x - Q_i)]^{1/2}}{2C_i}, P_i \leq x \leq Q_i, i = 1 - m. \quad (9)$$

### 3.5 Defuzzification

Herein a relative maximizing set and minimizing set method is suggested to rank alternative  $T_i$  based on Chen's approach (1985) to defuzzify all the final fuzzy evaluation values. Suppose there are  $m$  fuzzy numbers  $T_i$ ,  $i = 1 \sim m$ , with  $f_{T_i}(x)$  in  $M$ . The relative maximizing set  $M$  is fuzzy subset with  $f_M$  defined as

$$f_M(x) = \frac{x}{x_{\max}}, 0 \leq x \leq x_{\max}, \quad (10)$$

The relative minimizing set  $G$  is fuzzy subset with  $f_G$  defined as

$$f_G(x) = \frac{x_{\max} - x}{x_{\max}}, 0 \leq x \leq x_{\max} \quad (11)$$

where  $x_{\max} = \sup_x S$ ,  $S = U_{i=1}^n S_i$ ,  $S_i = \{x | f_{T_i}(x) > 0\}$ , usually  $k$  is set to 1.

Using Eqs. (10)-(11), defuzzification value  $U_T(T_i)$  can be obtained by the relative maximizing set and minimizing set method as Eq. (12). If  $U_T(T_i)$  is larger, ranking order of  $T_i$  is higher.

$$U_T(T_i) = 1 - U_R(A_i) + 1 - U_L(A_i) = 2 - U_R(A_i) - U_L(A_i), \quad i = 1 \sim m,$$

$$= 2 - \left( \frac{-D_i - [D_i^2 + 4C_i(x_R - Q_i)]^{1/2}}{2C_i} \right) - \left( \frac{-B_i + [B_i^2 + 4A_i(x_L - O_i)]^{1/2}}{2A_i} \right) \quad (12)$$

where  $x_R = \frac{x_{\max}}{2C_i} \left( (2C_i + D_i + x_{\max}) - \left( (2C_i + D_i + x_{\max})^2 - 4C_i(C_i + D_i + Q_i) \right)^{1/2} \right)$  (13)

$$x_L = \frac{x_{\max}}{2A_i} \left( 2A_i + x_{\max} - \left( (2A_i + x_{\max})^2 - 4A_i(A_i + O_i) \right)^{1/2} \right) \quad (14)$$

#### IV. Numerical Example

Assume five new product projects ( $A_i, i=1,2,\dots,5$ ) must be evaluated by three decision-makers ( $D_t, t=1,2,3$ ) of a company, and nine criteria ( $C_j, j=1,2,\dots,9$ ) must be considered. The nine criteria are classified to benefit qualitative, such as functionality ( $C_1$ ), level of ergonomics ( $C_2$ ), quality of assurance ( $C_3$ ), flexibility ( $C_4$ ), effectiveness ( $C_5$ ), testability ( $C_6$ ), benefit quantitative, such as number of attributes ( $C_7$ ), and cost quantitative, such as lead time ( $C_8$ ) and development cost ( $C_9$ ). Suppose ratings of five alternatives versus six qualitative criteria are determined as shown in Table 1, where VP=very poor, P=poor, F=fair, H=high and VH=very high. And VP=(0,0.1,0.3), P=(0.1,0.3,0.5), F=(0.3,0.5,0.7), H=(0.5,0.7,0.9) and VH=(0.7,0.9,1). Via Eq. (4), average ratings of alternatives can be obtained as also shown in Table 1. Further suppose the linguistic weighting values of criteria are determined as in Table 2, where UI=unimportant, LI=less important, IM=important, MI=more important and VI=very important. And UI=(0,0.15,0.3), LI=(0.15,0.3,0.5), IM=(0.3,0.5,0.7), MI=(0.5,0.7,0.85) and VI=(0.7,0.85,1). Through Eq. (5), the average weights of the criteria can be obtained as also shown in Table 2. Moreover suppose the three quantitative criteria are shown in Table 3, and Eq. (6) produces their normalized values as shown in Table 4.

**Table 2 Importance Weights and Average Weights**

Criteria	Decision Makers			Average Weights
	$D_1$	$D_2$	$D_3$	
$C_1$	VI	IM	IM	(0.4333,0.6167,0.8000)
$C_2$	MI	MI	IM	(0.4333,0.6333,0.8000)
$C_3$	VI	LI	IM	(0.3833,0.5500,0.7333)
$C_4$	IM	UI	LI	(0.1500,0.3167,0.5000)
$C_5$	IM	MI	IM	(0.3667,0.5667,0.7500)
$C_6$	IM	LI	UI	(0.1500,0.3167,0.5000)

$C_7$	LI	IM	IM	(0.2500,0.4333,0.6333)
$C_8$	VI	IM	VI	(0.5667,0.7333,0.9000)
$C_9$	VI	VI	IM	(0.5667,0.7333,0.9000)

**Table 3 Quantitative Values**

Criteria	$A_1$	$A_2$	$A_3$	$A_4$	$A_5$
$C_7$	(8,11,12)	(12,15,16)	(11,13,14)	(14,16,18)	(15,18,20)
$C_8$	(4,5,7)	(3,5,8)	(4,7,8)	(5,7,9)	(2,6,8)
$C_9$	(0.8,1.5,2)	(1,1.1,2.1)	(2.5,2.9,3)	(0.9,1.3,1.5)	(2.5,2.8,3)

**Table 1 Ratings and Average Ratings**

Alternatives	Criteria	Decision Makers			Average Ratings
		$D_1$	$D_2$	$D_3$	
$A_1$	$C_1$	VH	VH	H	(0.6333,0.8333,0.9667)
	$C_2$	VP	P	P	(0.0667,0.2333,0.4333)
	$C_3$	F	F	H	(0.3667,0.5667,0.7667)
	$C_4$	VH	VH	H	(0.6333,0.8333,0.9667)
	$C_5$	F	P	VP	(0.1333,0.3000,0.5000)
	$C_6$	H	VH	H	(0.5667,0.7667,0.9333)
$A_2$	$C_1$	P	F	F	(0.2333,0.4333,0.6333)
	$C_2$	P	F	P	(0.1667,0.3667,0.5667)
	$C_3$	F	H	F	(0.3667,0.5667,0.7667)
	$C_4$	H	VH	F	(0.5000,0.7000,0.8667)
	$C_5$	F	F	P	(0.2333,0.4333,0.6333)
	$C_6$	H	H	H	(0.5000,0.7000,0.9000)
$A_3$	$C_1$	H	VH	H	(0.5667,0.7667,0.9333)
	$C_2$	P	P	F	(0.1667,0.3667,0.5667)
	$C_3$	VH	H	VH	(0.6333,0.8333,0.9667)
	$C_4$	H	F	H	(0.4333,0.6333,0.8333)
	$C_5$	H	F	H	(0.4333,0.6333,0.8333)
	$C_6$	H	F	VH	(0.5000,0.7000,0.8667)
$A_4$	$C_1$	H	H	VH	(0.5667,0.7667,0.9333)
	$C_2$	F	F	P	(0.2333,0.4333,0.6333)
	$C_3$	H	H	VH	(0.5667,0.7667,0.9333)
	$C_4$	VH	H	F	(0.5000,0.7000,0.8667)
	$C_5$	VH	H	H	(0.5667,0.7667,0.9333)
	$C_6$	F	H	F	(0.3667,0.5667,0.7667)
$A_5$	$C_1$	H	H	H	(0.3000,0.4200,0.5400)
	$C_2$	H	H	VH	(0.5667,0.7667,0.9333)
	$C_3$	F	F	F	(0.3000,0.5000,0.7000)
	$C_4$	H	H	VH	(0.5667,0.7667,0.9333)
	$C_5$	H	VH	VH	(0.6333,0.8333,0.9667)
	$C_6$	F	P	F	(0.2333,0.4333,0.6333)

**Table 4 Normalized Values of Quantitative Criteria**

Alternatives	$C_7$	$C_8$	$C_9$
$A_1$	(0.0000,0.2500,0.3333)	(0.2857,0.4286,0.7143)	(1.0000,0.6818,0.4545)
$A_2$	(0.3333,0.5833,0.6667)	(0.1429,0.4286,0.8571)	(0.9091,0.8636,0.4091)
$A_3$	(0.2500,0.4167,0.5000)	(0.2857,0.7143,0.8571)	(0.2273,0.0455,0.0000)
$A_4$	(0.5000,0.6667,0.8333)	(0.4286,0.7143,1.0000)	(0.9545,0.7727,0.6818)
$A_5$	(0.5833,0.8333,1.0000)	(0.0000,0.5714,0.8571)	(0.2273,0.0909,0.0000)

Using Eqs. (7)-(9), membership functions of  $T_i$  can be obtained, and via Eqs.(13)-(14), we obtain  $x_R(A_1)=1.2199$ ,  $x_R(A_2)=1.4576$ ,  $x_R(A_3)=1.2471$ ,  $x_R(A_4)=1.8603$ ,  $x_R(A_5)=1.5371$ ,  $x_L(A_1)=0.1105$ ,  $x_L(A_2)=0.1398$ ,



$x_L(A_3)=0.1157$ ,  $x_L(A_4)=0.1386$ ,  $x_L(A_5)=0.1382$ . Finally, by Eqs. (10)-(12), ranking values of  $T_i$  can be produced as  $U_T(T_1)=0.9039$ ,  $U_T(T_2)=1.0519$ ,  $U_T(T_3)=0.9268$ ,  $U_T(T_4)=1.3367$ ,  $U_T(T_5)=1.0914$ . Ranking order of the five projects is  $A_4 > A_5 > A_2 > A_3 > A_1$ . Obviously, alternative project 4 is the first priority to implement.

## V. Conclusions

A relative maximizing set and minimizing set method has been proposed to defuzzify the final fuzzy evaluation values under fuzzy MCDM environment to rank alternatives for assisting in decision making. Formulae for procedure of ranking fuzzy numbers have been clearly presented in order to increase applicability of the suggested method. Feasibility of the suggested method has been demonstrated through a numerical example.

## VI. Acknowledgements

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## **Entrepreneurship, Innovation and Growth**

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### **Abstract**

The three basic sources of growth in any economy are growth in inputs of production, improvements in the efficiency of allocation of inputs across economic activities, and innovation that creates new products, new uses for existing products and brings about increases in the efficient of use inputs. Solow's path-breaking analysis of growth in the US economy during the first half of the twentieth century showed that the contribution of growth in inputs of production, namely labor and capital to aggregate growth, was around half, and the remaining half, that is the unexplained Solow residual, is commonly attributed to technical progress or the contribution of innovation in the sense I have used the term. Economic growth is driven significantly by innovation which increases the stock of useful knowledge. The process of innovation is largely endogenous, influenced by incentives, institutions and political economy. The paper expositis the analytics of the contribution to growth of innovation drawing on some recent models of endogenous growth. Increasing openness by reducing trade barriers and by encouraging foreign investment, plays an important role in spurring innovation, particularly as it occurs through learning by doing. In some models of trade between the industrialized North which innovates, and the developing South which imitates Northern innovation, trade accelerates the rate of innovation in the North because of the threat of imitation by the South. Entrepreneurship and factors that are conducive to its existence are explored. An entrepreneur is one with an innovative idea which she herself or others to whom she sells or licenses it implement. The entrepreneur assumes in part or all of the risk of profit or loss of the business venture. Issues of access to capital or finance, intellectual property protection and the chances of the idea of the entrepreneur being stolen or appropriated if she herself does not implement it are explored. The role of venture capital in financing start-up enterprises is found to be important, both because it relieves financial constraints and because the venture capitalist carefully screens the ideas of the entrepreneur and also monitors the enterprise after financing. The strength of intellectual property regimes (IPRs) improves the returns to commercialization of an innovation. Public provision of capital to small start-up enterprises, particularly in the high-tech sector, has been attempted in the US. The paper reports on the empirical analyses of their success. Research on national R&D systems and spending is summarized. The phenomenal success of the Indian software industry, and the contribution of India's education system and public policies (particularly foreign trade and investment policies) to the success of this industry are discussed. The paper concludes by examining the roles of

patent protection and the strength of IPRs on increasing the rate of innovation. The empirical evidence on the significance of monopoly rights through grant of patents on the rate of innovation and cost-effectiveness of patents as compared to alternatives in spurring innovation is found to be inconclusive. Finally the importance of openness to foreign trade and foreign direct investment to developing a positive climate for innovation, entrepreneurship and growth is stressed.

# Culture and Other Determinants of Venture Capital Investments

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## Abstract

The growth and prosperity of most countries are dependent on the productivity of their economies. Innovation is a driving factor of productivity and is often spurred by start-up companies. Those again typically require some sort of venture capital financing. However, early stage investments involve substantial uncertainty because of their riskiness and the asymmetric distribution of information between the entrepreneur and the investor.

While basic legal rules are needed to create a suitable environment for investments in general, economic factors (e.g., GDP per capita) which are often described to be a result of a high quality legal system potentially favor more venture capital investments. Those elements create the formal institutional environment of a country. In this study, we examine whether culture, i.e., the informal institutional environment of a country, can explain divergences in venture capital investments around the world. Particularly, we use trust as an important element of culture and potentially important factor in high-risk investment decisions of equity which requires a longer time-horizon and indirectly measure its effect on venture capital investments via language and religion.

Research suggests that trust plays an important role in economic decisions, especially if substantial uncertainty is involved. Trust is an element of culture and the level of trust differs significantly across countries. Language and religion are two strong determinants of a country's culture. Therefore, we proxy culture by language and religion in order to explain the variation in venture capital activity across 148 countries from 1998 to 2013. Controlling for economic and institutional factors, we find that countries where Islam is the predominant religion depict a lower level of venture capital investments relative to other cultural environments. Furthermore, individualism, which is lower in Islamic countries as well, is positively related to venture capital investments. Legal origins do not significantly explain the variation in venture capital investments. Overall, our results suggest that culture may play an important role in venture capital activity.

Countries which want to improve their formal institutional environment in order to promote venture capital investments should take into account that some recipes of other countries might not work in their own country because of cultural differences. In contrast, governments could try to take action in order to increase the degree of generalized trust within countries, e.g., by improving formal institutions, by a stronger commitment towards venture capital investments or by education on the functioning of venture capital markets.

**Keywords:** Venture capital, institutions, culture, trust, language, religion

## Consumers' Dissociation Responses to Incidental Similarity of Products in Different Product Domains

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### Abstract

In light of the need for uniqueness theory and optimal distinctiveness theory, the current study intends to examine how incidental similarity of products in different product domains influences consumer's dissociation responses, namely, possession disposal intention (PDI hereafter), especially when the two persons who encounter incidental similarity context belong to the same or different social groups (in-group vs. out-group). Specifically, we propose that (1) incidental similarity in more symbolic product domains leads to higher consumers' PDI than that in less symbolic product domains; (2) social group belonging and incidental similarity of products in different product domains jointly affect consumers' PDI, however, in a diverging pattern. In the in-group condition, higher degree of product symbolism leads to higher PDI, and vice versa. In the out-group condition, on the contrary, the degree of product symbolism has no significant effect on the level of PDI. Meanwhile, we speculate that (3) embarrassment elicited from incidental similarity encounters plays an important mediating role in the process.

Across three experiments, we tested the propositions by using different manipulations of incidental similarity of products in different product domains and obtained consistent results. In experiment 1, we tested the main effect by using a one-factor (product symbolism: high vs. low) design. Participants received the scenarios, which were used to manipulate the incidental similarity of products with different symbolism (high symbolic: jacket vs. low symbolic: cell phone). Then the participants answered questions measuring their PDI (dependent variable). Results indicated that consumers who encountered incidental similarity in more symbolic product domains revealed higher PDI than the less symbolic counterparts.

We tested how social group belonging moderates the effect of incidental similarity of products in different product domains on consumers' PDI in experiment 2, using a 2 (product symbolism: high vs. low) X 2 (social group belonging: in-group vs. out-group) between-subject design. After reading the scenarios, which were used to manipulate product symbolism and social group belonging, participants' PDI was measured again. Results confirmed the prediction that in-groups and out-groups responded to incidental similarity of products in a diverging pattern.

In experiment 3, we observed the mediation effect of embarrassment between incidental similarity of products in different product domains and consumers' PDI using a one-factor (product symbolism: high vs. low) design, with backpack the high symbolic condition and notebook the low symbolic condition. After completing scenario manipulations, participants' mood (including embarrassment) and PDI were measured. Results of a three-step regression and a bootstrapping analysis consistently showed that embarrassment played a significant mediating role in the process, serving as a mechanism for the effect of incidental similarity of products in different product domains on consumers' PDI.

To summarize, our findings suggest that incidental similarity of products in more symbolic product domains leads to higher dissociation responses than those in less symbolic product domains, and the occurrence in in-group condition heightens the effect. Feeling embarrassed triggers the aforementioned observations.

**Keywords:** incidental similarity, product symbolism, dissociation responses, possession disposal intention (PDI), embarrassment

## Empirical Asset Pricing – Saudi Stylized Facts and Evidence

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### Abstract

I estimate proxy specifications of (Fama and French, 2014) five-factor model to produce stylized facts of the Saudi capital market and test an APT model. The data set is the panel of 20 most actively traded firms, excluding firms with negative book value of equity. My contribution to the extant literature is three-fold: [1] organizing Saudi market data based on beta and firm-specific fundamentals, namely, growth, value, accounting earnings, and equity investments, [2] conducting a parsimony analysis within the theoretical framework of Merton's (1973) APT, and [3] quantifying the information risk facing the marginal investor by decomposing earnings into cash flows and accruals and investigating respective loadings in an unrestricted version of the parsimonious specification. Proxy asset pricing specifications, though intuitively appealing, are scant due to lack of theoretical frameworks and misguided significance tests of factor loadings. Throughout, I address this issue and keep the empirical analysis under describing market facts and testing an APT model. The study concludes with a significant, empirical explanation that specifies average returns in terms of the covariance risk and accounting accruals.

**Keywords:** asset pricing, factor models, APT

### I. Introduction

In this paper, I use a proxy model instructed by the five-factor model of Fama and French (2014) to produce stylized facts of the Saudi capital market in terms of documenting empirical regularities in average returns. I also estimate restricted and unrestricted versions of the proxy model and perform APT tests coupled with documenting a loading for the information risk in the Saudi market. As opposed to a factor asset pricing model where the right-hand side variables are respective portfolio premiums, a proxy model describes excess returns with state variables defined with respect to the right-hand side variables of a particular factor model. In fact, a proxy model implies a particular factor model. This means, [1] a proxy model is a sufficiency for a factor model, [2] a factor model is a necessity for a proxy model, and, by modus tollens, [3] an

absent factor model implies absence of a proxy model. Here, I establish the preceding logic as it greatly frames the underlying empirical analysis.

Fama and French (2014) maintain the empirical style they pioneered in the seminal study (Fama and French, 1993) and the updated version (Fama and French, 1995) (hereafter, FF(1993), FF (1995), and FF (2014)). FF (1995), which is considered, by far, the most influential paper in finance in the last thirty years, present three-factor explanations of many asset pricing anomalies by taking market research away from the traditional, pure hypothesis testing and into directly learning from data. Their approach, which centers on the extent to which factors may contribute economically significant information above that replicated in valuation, eventually earned Eugene Fama the 2013 memorial Nobel prize in economic science.

In addition to the time-honored three factors of [1] the excess return of the market portfolio over the risk-free rate, [2] the difference between the returns on a portfolio of small stocks and large stocks (SMB), and [3] the difference between the returns on a portfolio of high and low book-to-market stocks (HML), Fama and French (2014) entertain two more factors [1] the difference between the returns on a portfolio of robust and weak accounting earnings and [2] the difference between the returns on a portfolio of conservative and aggressive equity investments.

A note in order, factor models are typically rejected by The F-test of Gibbons, Ross, and Shanken (1989) (hereafter, GRS). Those empirical models, however, are designed to capture empirical regularities and so the primary concern is with the economic significance of parameter estimates (as opposed to the statistical significance). This is clearly unlike traditional asset pricing models (e.g., Sharp and Lintner's CAPM and Merton's APT), which produce risk-based theoretical frameworks of the average returns data generating process. Nonetheless, factor models can be turned into testable statements under the umbrella of APT. To reiterate, so long as state variables can proxy for the right-hand side variables of the factor model, APT allows for meaningful tests of the proxy model's parameter estimates. This is so paramount for this study that it exclusively instructs a mixed, step-wise research. In the first step, I produce stylized facts by estimating two data organization models instructed by (Fama and French, 2014), one restricted and the other unrestricted. In the second step, I test the two models within an APT theoretical framework

The rest of the paper is organized as follows: [1] background and development of (FF 2014), [2] Empirical analysis, and [3] conclusion.



## II. Background and Development (FF 2014)

Prior to FF (1993), many published empirical tests have concluded that, in addition to beta, there are factors that significantly explain the cross-sectional variation of returns. Black, Jensen, and Scholes (1972) show that, though the empirical market line is positively sloped, the intercept term is 9.79 standard deviations away from the null CAPM zero mean, a fact which leads to their rejection of the CAPM contending that the market model is misspecified and that factors other than beta may be relevant. Basu (1977) documents that low P/E portfolios earn returns higher than the CAPM. Rosenberg and Marathe (1979) illustrate that adding variables such as dividend yield, trading volume, and firm size provides better predictions of beta and washes off much of the measurement error. Banz (1981) and Reinganum (1981b) report that small firms tend to earn returns higher than could be explained by the CAPM. Litzenberger and Ramaswamy (1979) provide an evidence that returns are positively correlated with dividend yields. Gibbons (1982) rejects the CAPM by testing a restriction implied by Black's (1972) two-factor version on the merely statistical market model.

Aware of the strong negative correlation of -0.988 between size and beta, FF (1993) sort asset returns from 1963 to 1990 for all NYSE and AMEX stocks based on size (as measured by the natural logarithm of equity market capitalization) and beta (as estimated using the value-weighted portfolio of NYSE, AMEX, and NASDAQ stocks as regressor). As such, In a two-pass portfolio sort, FF (1993) separate beta and size effects on returns and show that [1] when sorts are size-based, the relationship between returns and both beta and size are clearly pronounced, and [2] when sorts are beta-based, the relationship is tenuous. FF (1993) thus show that, a linear two-factor model is simply misspecified and suggest a multifactor model. They conclude that size and the ratio of book-to-market value of equity replace beta altogether in explaining stock returns.

FF (1995) offer three-factor explanations of many anomalies and focus the market research onto directly learning from data and systematically documenting stylized facts (empirical regularities or patterns) that are evident in asset prices in large, representative samples. However, a significant literature (e.g., Haugen and Baker 1995; Cohen, Gompers, and

Vuolteenaho 2002; Fairfield, Whisenant, and Yohn 2003; Titman, Wei, and Xie 2004; FF 2006; FF 2008) documents that much of the variation in average returns left unexplained by the three factors is due to profitability and investments. This led FF (2014) to add profitability and investment to (FF 1995)'s beta, growth, and value. FF (2014) concludes by suggesting that value (i.e., HML) is redundant and that a four-factor model that drops HML performs as well as the five-factor model.

### III. Empirical Analysis

In this paper, I adhere to a mixed research paradigm through which I start with a descriptive, five-factor proxy to produce stylized facts and then proceed into a quantitative study where APT tests are performed via estimating restricted and unrestricted versions of a parsimonious, five-factor proxy.

#### *Data Selection*

The data set is the 2011-2014 panel of the 20 most actively traded firms in the KSA capital market, excluding firms with negative book value of equity in order to mitigate the presence of outliers and guarantee robust parameter estimates. This is so given the Gauss-Markov specification of the error term.

#### *Stylized Facts: Data Organization (FF 2014)*

In the first data organization model 'dataorg1', excess returns are regressed on beta, growth, value, earnings, and investments.

$$EERi = a1Bi + \ln(\text{growth}i^{a2} * \text{size}i^{a3}) + a4(\text{earnings}i) + a5 (\text{investments}i) + \varepsilon i \quad (\text{Dataorg1})$$

Where, in the cross section,<sup>1</sup>  $i$  indexes firms,  $EERi$  is excess returns,  $Bi$  is the quantity of the covariance, CAPM risk,  $\text{growth}i$  is the risk quantity of the value-growth factor,  $\text{size}i$  is the risk quantity of the small-large factor,  $\text{earnings}i$  is the risk quantity of the high-low earnings factor, and  $\varepsilon i$  is a Gauss-Markov error term. To minimize standard errors, I use [1] the natural logarithm of growth, measured as the lagged market value of equity, [2] the natural logarithm of size, measured as the lagged book value normalized by the lagged market value of equity, [3] earnings, measured as the lagged accounting earnings normalized by lagged book value, and [4] investments, measured as the contemporaneous change in the book value of equity normalized by lagged book value.

The model is strongly significant at all conventional levels and has an explanatory power of more than 94%. Beta's parameter estimate is negative and strongly significant at a 5% type I error. This suggests a negative market risk premium, which reconciles well with a negative, average market return of -24% over the four-year study period. Growth's parameter estimate is positive, which suggests that the average Saudi investor requires higher returns for firms with higher market values (i.e., growth firms). Value's parameter estimate is negative, which suggests that the average Saudi investor requires lower returns for firms with higher book values (i.e., value firms). Earnings' parameter estimate is positive and suggests that the average Saudi

<sup>1</sup> This is typical in asset pricing for excess returns focus the empirical analysis on risk premiums.

investor requires higher returns for firms with higher book earnings. This may suggest that accounting conservatism tends to be priced favorably (see Basu, 1997). Investments' parameter estimate is positive and suggests that the average Saudi investor requires higher returns for firms with higher reported equity changes. This has direct, information risk implications that are addressed in the second data organization model.

In the second data organization model 'dataorg2', accounting earnings are decomposed into operating cash flows and accruals, and so excess returns are regressed on beta, growth, value, operating cash flows, accounting accruals, and investments.

$$EER_i = a_1 B_i + \ln(\text{growth}_i^{a_2} * \text{size}_i^{a_3}) + a_4(\text{Cashflow}) + a_5(\text{Accruals}) + a_6(\text{investments}) + \epsilon_i \quad (\text{Dataorg2})$$

Where I measure cash flow as lagged operating cash flows normalized by lagged book value and accruals as the lagged difference between operating cash flows and accounting earnings normalized by lagged book value.

The model is strongly significant at all conventional levels and has an explanatory power of nearly 95%. Still Beta's parameter estimate is negative and strongly significant at a 5% type I error. This replicates well the negative average market return as mentioned above. The parameter estimates for both 'Growth' and 'Value' still have the same direction as their respective counterparts in 'dataorg1'. However, when the coarse accounting earnings are disintegrated into cash flows and accruals, cash flows pick a positive parameter estimate and accruals pick a negative. Furthermore, unlike that in 'dataorg1', investments in 'dataorg2' have a negative parameter estimate. This suggests that, when earnings' components are replicated individually in the empirical pricing model, the average Saudi investor requires lower returns for firms with higher investments and hence prices those investments favorably. This stands in great contrast with 'dataorg1' where only the total accounting earnings are priced and that the average investor's only answer to the inherent information risk underlying the rather coarse measure is to price investments unfavorably via requiring higher returns for firms with higher investments. When cash flows and accruals are individually priced, it's as if the investor prices aggressive firms favorably and conservative firms unfavorably. The investor also requires higher returns for firms with higher cash flows and less returns for firms with higher accounting accruals. The investor hence prices accruals favorably and cash flows unfavorably.

#### *Empirical Study and Tests (APT)*

"Empirical research is (or should be) informed by theory, since interpretations of empirical analysis is impossible without theoretical guidance" (Kothari, 2001, p. 1). In this context,

Merton's (1973) APT defines the theoretical framework for this study. Both estimated versions of the parsimonious proxy model are APT specifications, and so is satisfied the theoretical framework necessary for a quantitative study.

FF 2014 (hereafter, FF) is an organization of data that has no underlying theoretical framework. (FF is the outcome of an inductive study.) APT, however, is a testable, asset pricing theory, but the risk drivers are not identified. APT just tells us that there exists more than one priced risk driver, and so, as opposed to the CAPM, there is more to explaining the contemporaneous variation in excess returns than just the systematic risk, Beta. FF is thus consistent with APT. The heart of this study is to use APT as a theoretical framework in order to test FF. On one hand, FF is based on factors (i.e., risk premiums), which are not asset specific. On the other hand, APT is based on state variables, which are asset specific (e.g., the systematic risk, Beta). Accordingly, state proxies are ought to be used in the tests so as to purport to the respective FF risk premiums. In 'dataorg1', I use 'beta' as a state variable that purports to FF market risk premium. By the same token, I use 'Growth' as a state variable that purports to FF portfolio premium that is short in firms with big market size and long in firms with small market size (i.e., SMB), 'Value' as a state variable that purports to FF portfolio premium that is short in firms with low value and long in firms with high value (i.e., HML), 'earnings' as a state variable that purports to FF portfolio premium that is short in firms with low earnings and long in firms with high earnings (i.e., the earnings premium), and 'investments' as a state variable that purports to FF portfolio premium that is short in firms with low investments and long in firms with high investments (i.e., the investments risk premium). In 'dataorg2', I also use 'operating cash flows' as a state variable that purports to FF portfolio premium that is short in firms with low cash flows and long in firms with high cash flows, and 'accounting accruals' as a state variable that purports to FF portfolio premium that is short in firms with low accounting accruals and long in firms with high accounting accruals.

With APT serving as theoretical framework, 'dataorg1' can be interpreted as a restricted parsimony (PR) and 'dataorg2' can be interpreted as an unrestricted parsimony (PU).

PR strongly explains the variation in average returns in the study sample. The explanatory power is more than 94%. The direction of parameter estimates replicates the predictions from prior, influential studies (e.g., FF 1995). Prior empirical asset pricing studies consider interpreting the magnitude of parameter estimates an ambitious apparatus. With APT as a theoretical framework, the respective magnitudes of PR stand in contrast to their (FF 1993) counterparts. Unlike (FF 1993) where value and growth replace beta altogether, beta in PR is strongly significant at all conventional levels and successfully replaces value, growth, earnings, and

investments all together. A possible explanation here is that over this study's sample, value, growth, earnings, and investments are all reasonable covariates of book value, which doesn't add significant pricing news over the covariance risk.

PU also strongly explains the variation in average returns in the study sample. The explanatory power is almost 96%. The direction of parameter estimates is the same as of PR except for investments. When accounting earnings are decomposed in cash flows and accruals, cash flows retain the sign of earnings and both are priced unfavorably. Accruals, however, pick a negative and significant parameter estimate at the 5% level, and is priced favorably along with investments. A possible story here is that when the components of accounting earnings are replicated individually in the empirical pricing model estimated over the study sample, the average investor shows his ultimate concerns with future cash flows by focusing on accruals and not cash flows. Unlike cash flows, accounting accruals are documented to provide reliable signals regarding future cash flows and hence average returns via the advantage of an exercise of management discretion in terms of conveying private information to investors (see, e.g., Kothari, 2002; Dechow, 1994). Dechow, Richardson, and Sloan (2008) also explain that accounting accruals reduce timing and mismatching problems in cash flows. This is paramount for asset pricing. With accruals priced individually, the average Saudi investor tends to price investments favorably though not significantly.

Based on the preceding, PR and PU reduce, significance wise, to a third model, PS that specifies average returns in terms of the covariance risk and accounting accruals:

$$EER_i = a_1 B_i + a_2 (\text{Accruals}) + \varepsilon_i \quad (PS)$$

PS is strongly significant with an explanatory power of almost 95%. The parameter estimates of beta and accounting accruals are both strongly significant at all conventional levels. PS suggests that in addition to the systematic risk, the investor prices the firm-specific, private information that management conveys to investors via accounting accruals. Accounting accruals thus mitigates the information risk by picking a negative sign. In the spirit of FF, PS suggest that growth, value, cash flows, and investments are redundant and that a two-factor model of the covariance risk and accounting accruals performs as well as the six-factor model estimated by the unrestricted version, PU. Future asset pricing research may consider PS an empirical APT evidence that is qualified by both the market and the sample I analyzed in this study.

#### IV. Conclusion

Proxy asset pricing specifications, though intuitively appealing, are scant due to lack of theoretical frameworks and misguided significance tests of factor loadings. Nevertheless, the

empirical analysis may extend beyond describing market facts and into testing an APT model. This is so since APT is a testable, asset pricing theory where the risk factors are not identified. APT simply states that there exists more than one priced risk driver, and so, as opposed to the CAPM, there is more to explaining the contemporaneous variation in excess returns than just the systematic risk, beta. FF is thus consistent with APT.

The study estimates two FF versions to produce stylized facts of the Saudi capital market and test an APT model. The study in this fashion adheres to a step-wise design and progressed in two steps: [1] estimating the two versions based on whether accounting earnings were replicated in total or decomposed into cash flows and accruals, and [2] testing the two versions as APT parsimonious specifications.

The final outcome of the study is a significant, empirical specification that explains average returns in terms of the covariance risk and accounting accruals where the parameter estimates are robust at all conventional levels. Exogenously, accounting accruals may be interpreted as a measure of the firm-specific information risk faced by investors. The specification suggests that in addition to the systematic risk, the investor prices private information that management conveys via accounting accruals, which is both firm-specific and one that mitigates the information risk. In the spirit of FF, the concluding specification suggests that growth, value, cash flows, and investments are redundant and that a two-factor model of beta and accruals performs as well as the six-factor model estimated by the unrestricted version, PU. Future asset pricing research may consider the specification an empirical evidence within an APT theoretical framework and one that is qualified by both the KSA market and the sample I studied in this paper.

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Table 1:  
Descriptive  
Statistics

Statistics	Returns	Beta	Growth	Value	Earnings	Cash flows	Accruals	Invest.
Mean	-0.24386	1.000006	11.00758	5.249383	0.018112	0.014072	-0.43821	-0.00851
Standard Error	0.081866	0.255308	0.222587	0.387428	0.036355	0.005379	0.188116	0.023633
Median	-0.30108	1.177928	11.17489	5.124092	0.012746	0.003703	-0.28733	0.007095
Standard Deviation	0.366114	1.141774	0.99544	1.732632	0.162584	0.024054	0.84128	0.105688
Sample Variance	0.13404	1.303648	0.990902	3.002013	0.026433	0.000579	0.707752	0.01117
Kurtosis	1.258528	1.569481	-0.76931	-0.89521	5.915076	3.535951	14.48126	7.407545
Skewness	-0.60439	0.697246	-0.12251	0.296573	0.84857	1.8252	-3.6156	-0.87508
Range	1.508646	4.831187	3.448409	5.703472	0.903769	0.100916	4.134519	0.614339
Minimum	-1.1365	-1.10651	9.384126	2.724048	-0.387	-0.01401	-3.77444	-0.34587
Maximum	0.372146	3.724676	12.83254	8.42752	0.516766	0.086902	0.360077	0.268471
Sum	-4.8772	20.00012	220.1515	104.9877	0.36224	0.281442	-8.76415	-0.17011
Count	20	20	20	20	20	20	20	20

Table 2: Estimating (dataorg1)  
Data Organization 1 (PR)

<i>Regression Statistics</i>	
Multiple R	0.9719032
R Square	0.9445958
Adjusted R Square	0.9248086
Standard Error	0.1003923
Observations	20

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	2.40565	0.48113	47.7376846	2.648E-08
Residual	14	0.141101	0.010079		
Total	19	2.546751			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.413706	0.264387	-1.56477	0.13995368	-0.9807601	0.153348
Beta	-0.3273672	0.023933	-13.6782	1.7136E-09	-0.3786994	-0.27603
Growth	0.0502963	0.025946	1.938475	0.07299674	-0.005353	0.105946
Value	-0.0115026	0.015345	-0.74961	0.46589985	-0.0444138	0.021409
Earnings	0.2922503	0.202143	1.445759	0.17025789	-0.1413037	0.725804
Investments	0.1571918	0.280819	0.559762	0.58448696	-0.4451046	0.759488



Table 3: Estimating (dataorg2)  
Data Organization 2 (PU)

<i>Regression Statistics</i>	
Multiple R	0.979332
R Square	0.959091
Adjusted R Square	0.94021
Standard Error	0.089522
Observations	20

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	6	2.442566	0.407094	50.79674	2.81E-08
Residual	13	0.104184	0.008014		
Total	19	2.546751			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.15659	0.266029	-0.58862	0.566204	-0.73131	0.418131
Beta	-0.32307	0.021607	-14.9523	1.44E-09	-0.36975	-0.27639
Growth	0.033558	0.02458	1.365261	0.195332	-0.01954	0.086659
Value	-0.02079	0.01436	-1.44806	0.171287	-0.05182	0.010229
Cash Flow	0.118441	0.200243	0.591487	0.564338	-0.31416	0.551041
Accruals	-0.72991	0.27205	-2.68299	0.018793	-1.31764	-0.14218
Investments	-0.10185	0.278075	-0.36629	0.720044	-0.7026	0.49889

Table 4: Estimating (PS)

<i>Regression Statistics</i>	
Multiple R	0.974104836
R Square	0.948880231
Adjusted R Square	0.94286614
Standard Error	0.087511109
Observations	20

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	2.416561	1.208281	157.7761816	1.05E-11
Residual	17	0.130189	0.007658		
Total	19	2.546751			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.094217906	0.027713	3.399772	0.00340946	0.035749	0.152687
Beta	-0.310192209	0.017633	-17.592	2.4085E-12	-0.34739	-0.27299
Accruals	0.619559706	0.164402	-3.76856	0.001531913	-0.96642	-0.2727

# Farmer Empowerment through Model Optimization Buds Germination of Eyes Sugar Cane Breeding with Water Hot Treatment Technology

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## Abstract

Needs sugarcane seedlings was very high at the level of sugar cane farmers, while technology in the provision of seed cane is still a hump. In fact in the field of seed cane with a hump has the disadvantage that more extravagant, acts simultaneously, and needs more seeds can Based on the description above, the problem can be formulated as follows: 1) Knowing the characteristics, fertilization and seed cane cutting techniques are good with treatment Hot Water Treatment (HWT)?; and How the partnership model cane farmers with sugar factory in the treatment Hot Water Treatment for increasing values of public education?. The research method called the model optimization cane buds germination of seeds with hot water treatment technology. Include the category of research (action research) supported the primary data that is equipped with a secondary data. This study uses action research study with the following steps: 1) Demonstration experiment to find the best on the characteristics, cutting and fertilization techniques sugarcane seedlings; 2) Once the technique has been prepared pre models/early models; 3) stabilization of the model with the method of FGD with stakeholders; 4) Results of FGD is used to finalize the model so that the model tested can be found. Results of research on the optimization model of sugarcane seed germination buds through hot water treatment technology can be summarized as follows; The rate of seed germination bud chips up to 10 days after planting germinated higher, with the shade; Soaking the seeds bud chips in hot water treatment can improve germination; The use of seed bud chips can increase the number of shoots 2-3 buds; The use of seed bud chips healthier and avoid the disease of sugarcane; Participation of farmers in the FGD is very good, so that partnerships can be built with awareness and full participation of farmers.

**Keywords:** Excel Sugarcane Seedlings, Tools HWT, Partnership Sugarcane Farmers

# **Non-materialistic Imponderables Rationalism System, Alternative Analysis to Control Middle Class's Consumption Behavior in Indonesia**

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## **Abstract**

Indonesia is a large potential market because it has a population of 253.60 million, where 56.5% of them are belong to the middle class society (World Bank, 2014). It was also supported by the fact that, middle-class society in Indonesia tend to spend their earnings for consumption rather than for savings and investment. According to the World Bank, the number of the money spent by this middle class society is very fantastic. Shopping clothing and footwear in 2010 reached Rp.113,4 trillion. Household spending and services by Rp.194,4 trillion, spending abroad Rp 50 trillion, and transportation costs Rp. 283.6 trillion. In addition, the consumption amount of imported products has reached 1.31389 billion tons in 2013 (Badan Pusat Statistik, Indonesia's Central Bureau Of Statistics).

The consumption positive trend contributes 70 percent on gross domestic product (GDP) of Indonesia (by expenditure approach) and is expected to encourage the growth of the country's economy. But using the consumption of middle class society in Indonesia as the 'tip of the spear' or in other word, as a crucial part of the national development creates crisis for Indonesia when the global economy is in trouble. Besides, the phenomenon of middle class society consumerism would lead Indonesia to middle-income trap, which one side of a country can no longer compete in production; even with low wages such as small-medium enterprise that originally become a competitive advantage of Indonesia; because the people are more likely being consumer rather than being producer.

This paper is the result of research through alternative analysis to control middle class consumption behavior in Indonesia through three main elements in non-materialistic imponderables rationalism system triggered by Monzer Kahf, namely; Success Concept, Consumer Behavior Time Scale, and Treasure Concept. Those sistem would control people's consumption behavior so that the commonweal would become faster. Data acquired and processed in this research is secondary data from various sources. The method used is descriptive method through analysis of historical data and literature studies on the pattern of consumption of Indonesian society, gross domestic income, economic growth, and the other data. The results of this study are expected to be considered by the government in planning

policy to control the level of consumption of the Indonesian middle class society so as to prevent the occurrence of the MIT in Indonesia.

**Keyword:** Consumption behavior, middle-class society, non-materialistic imponderables rasionalism, commonweal

# Examining the adoption of travel information using geotag in social network services

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## Abstract

Social networking services (SNSs) allow users to mark geographic information (geotag) with their travel information posting. This study attempts determinants of travel information adoption with geotag in SNSs. We conceptualize crucial factors based on the elaboration likelihood model, DeLone and McLean model of IS Success, and hedonic technology acceptance model. Specifically, we propose factors of argument quality (i.e., geotag information, system, and design quality) and source credibility influencing on utilitarian motivations (i.e., perceive usefulness and ease of use) and hedonic motivation (i.e., perceived enjoyment), which influence on geotagged travel information adoption. Results of this study indicate that argument quality positively affect geotag ease of use, whereas source credibility positively affect geotag usefulness. Geotag ease of use positively affects geotag usefulness and geotag enjoyment. In addition, geotag usefulness, geotag ease of use, and geotag enjoyment positively affects tourism information adoption with geotag in SNSs. Theoretical and practical implications of our results are also discussed.

**Keywords:** Geotag, Travel information adoption, elaboration likelihood model, DeLone and McLean model of IS Success, an extended unified theory of acceptance and use of technology, Smart tourism

## I. Introduction

Tourism and spaces are undivided because tourist behaviors occur as interacting with and occur within a space (Tussyadiah & Zach, 2012) and thus, geographical information is very important in the context of tourism. Recently, thanks to the advent of location aware technology, social networking services (SNSs) are utilizing geo-based technology and its one example is geotag. Geotag in SNSs is defined as a mark of

geographical information with SNSs contents (Jiang, Wang, & Yu, 2011). In tourism context, geotag allows SNSs users to share tourism information with geospatial mark. In particular, geotag is represented by short textual annotations (Ivanov, Vajda, Lee, Goldmann, & Ebrahimi, 2012). Clicking on these geotags, SNS users can explore tourism information tagged on the particular destination (Ivanov et al., 2012). In other words, geotag is a tool for personal collections and for grouping and indexing (Ivanov et al., 2012).

In spite of the utilization of geotag with tourism information, there has been limited number of studies in tourism research. Also, prior studies on geotag tried to mainly understand on personalized service (e.g., Jiang et al., 2013; Yamasaki et al., 2013). However, geotag has emerged as a persuasive tool affecting exploring and adopting tourism information. For this reason, there is a need to understand the impact of geotag toward prospective tourists using SNSs. Geotag affect individuals' beliefs and subsequently, beliefs affect individuals' decision to whether or not adopt tourism information using geotag. This persuasive geotag can be considered as a factor associated with the geotag and a factor associated with the geotag provider. And then, SNS users motivated by utilitarian aspects (perceived usefulness and ease of use) and its hedonic aspect (perceived enjoyment), which will lead to adopt travel information using geotag in SNSs.

Thus, this study tries to examine the adoption of tourism information using geotag with the integrated view of the elaboration likelihood model, DeLone and McLean model of IS Success, and hedonic technology acceptance model. Specifically, this study suggests two objectives: (1) to examine the influence of argument quality and source credibility on SNSs users' beliefs; and (2) to examine the influence of beliefs on tourism information adoption in SNSs.

## II. Theoretical background

### 1. Elaboration likelihood model

Elaboration likelihood model (ELM) is one of the dual process models that explain the human information processing behaviors, as introduced by Petty & Cacioppo (1986). It assumes that given persuasive messages are processed in a central route made of more cognitive thinking and a peripheral route which is processed based on the heuristic cues without a thoughtful cognitive thinking (Bhattacharjee & Sanford, 2006; Petty & Cacioppo, 1986).

In various studies related to ELM, argument quality and source credibility represent important variables of the central and peripheral route (Bhattacharjee & Sanford, 2006; Li, 2013; Petty & Cacioppo, 1986; Sussman & Siegal, 2003). Argument quality represents the intensity of the persuasiveness of information or arguments, and source credibility is defined as the degree of reliability or trust on the source by the user (Bhattacharjee & Sanford, 2006; Sussman & Siegal, 2003). In addition, such credibility of the source was found to affect the cognitive judgment. It is because if a recommendation is made by the celebrities or reliable experts, it can cause influence to the cognitive decisions of the people such as on the usefulness of information system (Bhattacharjee & Sanford, 2006).

On the other hand, geotag which contains the tourism information on the SNSs can be considered as persuasive message that influence the thinking of an individual. It is a persuasive tool and people can determine whether the geotag is useful, easy to use or fun and determine whether geotagged tourism information may be

adopted or not. In addition, to SNSs users based on the ELM, argument quality of geotag may affect the usefulness and ease of use, and the credibility of the geotag provider may affect its usefulness, ease of use, and enjoyment.

## **2. DeLone and McLean model of Success**

To capture the argument quality, we also took into consideration of the theory of DeLone and McLean model of success. IS success model postulated that system quality and information quality affects use and user satisfaction, which affect individual impact and organization impact (DeLone & McLean, 1992). Later, they add the “service quality” and updated their model of IS success (DeLone & McLean, 2003). In other words, system quality, information quality, and service quality affect use and user satisfaction, which further affect individual and organizational impact (DeLone & McLean, 2003).

In particular, service quality is more important in the context of organizational systems (DeLone & McLean, 2003). In this study, service quality is excluded because geotag is one of individual systems. In addition, geotag limits the amount of content that can be displayed in SNSs contents. This is because that geotag is one of the tools of SNSs. Therefore, it is important to how to present or display geotag in SNSs. According to Lee & Chung (2009), mobile banking is an individual system for the same reason as this study and they excluded service quality. In addition, they combined IS success model with interface design quality because design quality evaluates the mobile banking services’ quality. Thus, we assume that design quality is a crucial factor to display argument using geotag. In addition, the persuasive strength of arguments embedded in geotag is a factor of geotag success and also a central factor for processing information exposed by a geotag in SNSs. Thus, this study relied on information quality, system quality, and design quality to assess argument quality of geotag.

## **3. Hedonic Technology Acceptance Model**

Technology acceptance model (TAM) proposed by Davis (1989), is a dominant model to explain user acceptance of Information system. The TAM is rooted in the theory of reasoned action (TRA) and posits that user two beliefs – perceived usefulness and perceived ease of use - could explain user acceptance (Davis, 1989). The TAM is applied within the acceptance and use of IS and is accepted the conciseness and predictability in many fields (Chung, Han, & Joun, 2015).

The TAM in the organizational situation, explains the acceptance of information technology by being related to the utilitarian or functional value (Van der Heijden, 2004). In other words, it is more suitable for explaining the use of information technology in the involuntary environment and is considered as an organizational information system (Van der Heijden, 2004). However, an information system for providing fun and self-achievement value to the users can be considered as a hedonic information system (Van der Heijden, 2004). The geotag is not used to achieve business objectives in organizational conditions, but used by considering the self-achievement values by SNSs users. Therefore, the geotag can be considered as a hedonic information system.

## **III. Research model and hypotheses**

To understand tourism information adoption using geotag in SNSs, this study proposes a research model



depicted in Figure 1.

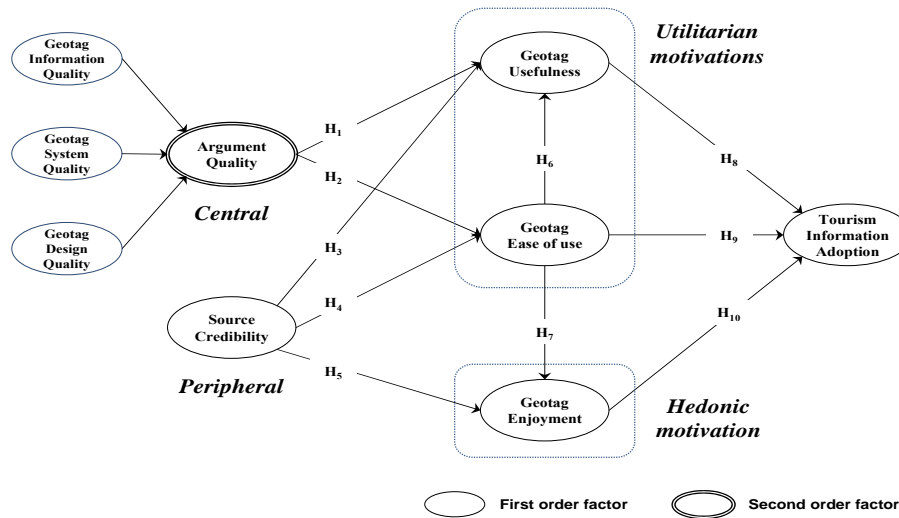


Figure 1. Research model

### 1. Argument quality and utilitarian motivations

Argument quality is defined as the persuasive strength of arguments embedded geotag (Bhattacharjee & Sanford, 2006). As mentioned in the literature part, this study assumed that argument quality includes three dimensions (information quality, system quality, and design quality) to be examined in the geotag usage context. The ELM suggests that argument quality affects the individual’s rational judgement (Bhattacharjee & Sanford, 2006). Prior research indicates that higher degrees of argument quality may increase perceived usefulness and ease of use of information system (Li, 2013). The higher elaboration of the geotag, the more people try to judge it by utilitarian standards. Hence, the following hypotheses are formulated.

H<sub>1</sub>: Argument quality will positively influence perceived usefulness of geotag.

H<sub>2</sub>: Argument quality will positively influence perceived ease of use of geotag.

### 2. Source credibility, utilitarian motivations, and hedonic motivation

Prior studies suggest that source credibility may play an important role in the development of cognitive response (i.e., Usefulness and Ease of use) and affective response (i.e., Enjoyment) (Li, 2013). ELM represented that peripheral cues such as source credibility are dealt with the peripheral route based on rules of thurum in rational decision making (Tam & Ho, 2005) and also affect IS user’s affection (Bhattacharjee & Sanford, 2006). For this reason, individuals try to judge the utilitarian motivations or values using source credibility. In addition, source credibility appeals to SNS users’ emotions or affections. Thus, SNS users will perceive that geotag is useful, easy and enjoyable for tourism information. We further propose that:

H<sub>3</sub>: Source credibility will positively influence perceived usefulness of geotag.

H<sub>4</sub>: Source credibility will positively influence perceived ease of use of geotag.

H<sub>5</sub>: Source credibility will positively influence perceived enjoyment of geotag.

### **3. Utilitarian motivations, hedonic motivation, and tourism information adoption**

Based on the hedonic TAM, this study adopted perceived usefulness, ease of use, and enjoyment regarding geotag. In addition, this study considered geotag usefulness and ease of use as the utilitarian motivation, whereas geotag enjoyment is considered as the hedonic motivation (Kim, Chan, & Gupta, 2007). These beliefs are regarded as crucial factors to predict individual behavior intention. In many past researches, ease of use was shown to be a significant predictor of usefulness and enjoyment of technology or system (Cyr, Head, & Ivanov, 2006; Lee, Cheung, & Chen, 2005). Following this logic, this study expects that ease of use of geotag can enhance SNS users to form perceived usefulness and enjoyment using geotag for tourism information. Hence, we expect that:

H<sub>6</sub>: Perceived ease of use of geotag will positively influence perceived usefulness of geotag.

H<sub>7</sub>: Perceived ease of use of geotag will positively influence perceived enjoyment of geotag.

According to the economic theory of utility, to achieve maximum utility or value is an ultimate goal for users (Kim et al., 2007). In this regard, the existing studies contents that perceived usefulness, ease of use, enjoyment of information systems can facilitate the formation of adoption information (Li, 2013). The perceived usefulness of geotag is a utilitarian aspect. The more geotag has the utilitarian aspect, people perceive more efficiency of geotag, which makes people more likely to adopt tourism information using geotag. Moreover, when the geotag makes participation easy, SNSs users are more likely to adopt tourism information using geotag. In addition, if people perceived hedonic value of geotag, they will adopt travel information using geotag in SNSs. Hence, we propose that:

H<sub>8</sub>: Perceived usefulness of geotag will positively influence tourism information adoption.

H<sub>9</sub>: Perceived ease of use of geotag will positively influence tourism information adoption.

H<sub>10</sub>: Perceived enjoyment of geotag will positively influence tourism information adoption.

### **IV. Research methodology**

Our instruments were developed using existing scales and are listed in Appendix 1. In addition, argument quality was measured with sub-constructs, using a second-order formative construct as a function of three dimensions (i.e., information quality, system quality, and design quality) came from Lee & Chung (2009). The source credibility constructs were adapted from Bhattacharjee & Sanford (2006). The geotag usefulness and geotag ease of use items were adapted from Van der Heijden (2004). The geotag enjoyment items were developed by Kim et al. (2007). The tourism information adoption constructs also were adapted from Bhattacharjee & Sanford (2006). All constructs were measured with a seven-point Likert scales ranging from strongly disagree (1) to strongly agree (7).

This study targeted individuals who have seen geotag on SNSs and particularly, data were collected from undergraduate students majoring in hotel and tourism management in Korea. This reason is that they are similar

to normal users with geotag in SNSs and accustomed to use it. The sample of this study consisted of 110 students. The gender ratio of participants was female 74 (67.3%) and male 36 (32.7%). The 20-29 year age group had the largest proportion at 98.2% (n = 108) and 1.8% of the subjects were under 20 years of age (n = 2).

## V. Data analysis and results

### 1. Measurement model

Descriptive statistics were tested using SPSS. The other data analyses were used with PLS graph 3.0. To confirm the validity of convergent, we followed the three criteria suggested by Bagozzi & Yi (1988) and Hair, Black, Babin, & Anderson (2010). The results show that the standardized path loadings of all items are above 0.6 and the composite reliability (CR) and the Cronbach's  $\alpha$  for each construct exceed 0.7 (Table 1). In addition, the values of the average variance extracted (AVE) for each construct are above 0.5. All the criteria indicated the convergent validity of the measurement model.

**Table 1**

**Descriptive statistics of constructs**

Cinstructs		CR	AVE	Cronbach's $\alpha$	Mean	Std. deviation
Argument Quality	Information Quality	0.929	0.767	0.897	4.018	1.187
	System Quality	0.897	0.687	0.834	4.877	1.024
	Design Quality	0.936	0.784	0.908	4.650	1.068
Source credibility		0.942	0.803	0.918	3.464	1.167
Geotag Usefulness		0.957	0.818	0.944	4.613	1.389
Geotag Ease of use		0.868	0.623	0.794	4.845	1.042
Geotag Enjoyment		0.944	0.807	0.916	4.698	1.157
Tourism information Adoption		0.973	0.922	0.957	4.724	1.334

According to Gefen & Straub's (2005) two criteria to check the discriminant validity of the measurement, the results show that all item loadings to construct correlations are higher than its loading on any other constructs and the square root of the AVE is greater than the correlations between that construct and other constructs (Table 2). Therefore, discriminant validity was verified.

**Table 2**

**The square roots of the AVEs and the correlations between the constructs.**

Constructs		1	2	3	4	5	6	7	8
Argument Quality	1. Information Quality	<b>0.876</b>							
	2. System Quality	0.324**	<b>0.829</b>						
	3. Design Quality	0.506**	0.614**	<b>0.886</b>					
4. Source credibility		0.594**	0.329**	0.295**	<b>0.896</b>				
5. Geotag Usefulness		0.536**	0.474**	0.360**	0.527**	<b>0.905</b>			
6. Geotag Ease of use		0.460**	0.630**	0.498**	0.391**	0.683**	<b>0.789</b>		
7. Geotag Enjoyment		0.263**	0.524**	0.340**	0.320**	0.553**	0.577**	<b>0.898</b>	
8. Tourism information Adoption		0.506**	0.484**	0.293**	0.424**	0.699**	0.639**	0.566**	<b>0.960</b>

Note. The square roots of the AVEs are displayed on the diagonal in bold, \*\*p < 0.01

### 2. Structural model

Chin (1998) explained that the relationship between the different latent variables through structural model.

Our proposed model was tested explanatory power and path significance using 500 iterations of the bootstrapping technique in PLS graph 3.0.

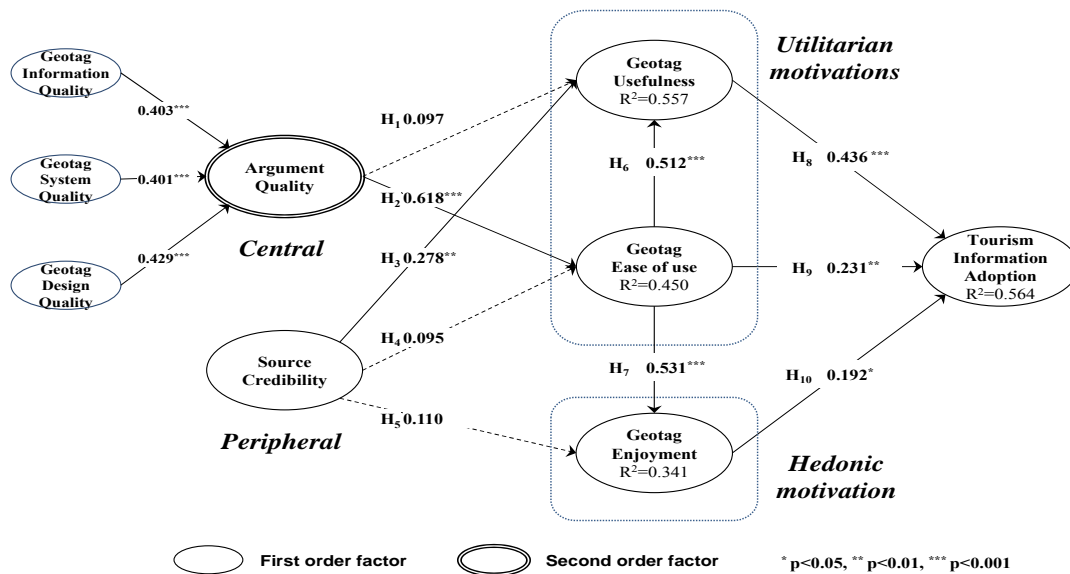


Figure 2. Research model and path loadings

Figure 2 depicts the significant and insignificant paths in research model. As hypothesized, argument quality positively influenced geotag ease of use and thus, H<sub>2</sub> is supported ( $\beta = 0.618$ ,  $t$ -value = 5.953,  $p < 0.001$ ). However, argument quality did not influence geotag usefulness ( $\beta = 0.097$ ,  $t$ -value = 0.785, not supported), thus invalidating H<sub>1</sub>. Source credibility had a positive effect on geotag usefulness ( $\beta = 0.278$ ,  $t$ -value = 2.791,  $p < 0.01$ ). However, source credibility did not have an effect on geotag ease of use ( $\beta = 0.095$ ,  $t$ -value = 0.881, not supported) and enjoyment ( $\beta = 0.0110$ ,  $t$ -value = 1.026, not supported). So, H<sub>3</sub> is validated, but H<sub>4</sub> and H<sub>5</sub> are not.

Hypotheses H<sub>6</sub> and H<sub>7</sub> addresses the structural relationships among geotag usefulness, ease of use, and enjoyment. Geotag ease of use positively influenced usefulness ( $\beta = 0.512$ ,  $t$ -value = 4.699,  $p < 0.001$ ). In addition, geotag ease of use also positively influenced enjoyment ( $\beta = 0.531$ ,  $t$ -value = 5.637,  $p < 0.001$ ). Therefore, H<sub>6</sub> and H<sub>7</sub> are supported. Hypotheses H<sub>8</sub>, H<sub>9</sub>, and H<sub>10</sub> address the structural relationships among geotag usefulness, ease of use, enjoyment, and tourism information adoption. Geotag usefulness ( $\beta = 0.436$ ,  $t$ -value = 4.275,  $p < 0.001$ ), ease of use ( $\beta = 0.231$ ,  $t$ -value = 2.079,  $p < 0.05$ ), and enjoyment ( $\beta = 0.192$ ,  $t$ -value = 1.980,  $p < 0.05$ ) positively influence tourism information adoption, so H<sub>8</sub>, H<sub>9</sub>, and H<sub>10</sub> are all verified.

## VI. Discussion and Conclusions

The purpose of this study is that understanding tourism information adoption using geotag in SNSs and thus, we conceptualize crucial factors based on the elaboration likelihood model, DeLone and McLean model of IS Success, and hedonic technology acceptance model.

As a result of this study, argument quality of geotag was shown to cause a positive effect on the ease of use of the geotag. On the other hand, the credibility of geotag provider was found to affect the usefulness of the

geotag. Therefore, in order to form the ease of use of the geotag, it is important to maintain the quality of information, design and the system associated with geotag. In addition, to the people receiving the information, for them to recognize the usefulness of the geotag related to the tourism information, the marketers and individuals who wish to deliver the tourism information should clearly reveal who they are using the geotag.

As a result of this study, ease of use of geotag had a positive impact on the usefulness and enjoyment, and the ease of use, usefulness and enjoyment had a positive impact on the adoption of tourism information. Through these results, the role of ease of use was reconfirmed. In addition, perceived usefulness of geotag was the strongest predictor of the tourism information adoption using geotag. This is not consistent with the argument of Van der Heijden (2004) which suggests that the perceived usefulness loses its main predictive power in the hedonic information systems. Geotag is hedonic and individual information system, but usefulness of geotag is more perceived by SNS users.

The theoretical importance of this study lies in the fact that this study confirmed the persuasive role of geotag in the context of tourism information adoption with the integrated perspectives of the elaboration likelihood model, DeLone and McLean model of IS Success. This study also suggests that structuring of ease of use and usefulness related to the use of geotag is important in practice. Therefore the SNSs companies should structure ease of use and usefulness in order to vitalize the geotag. In addition, individuals and marketers for posting and sharing the tourism information should intuitively expose their credibility on the profile to show that provided geotag can be more useful in the tourism information. In spite of such implications, this study has the following limitation. This study has targeted only the students who often use the geotag. Thus, there is a limit to the generalization. In the future, there is a need to investigate and identify the age groups who uses the SNS.

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### Appendix 1. Constructs and items

Constructs		Items	
Argument Quality	Geotag Information Quality	IQ1	Geotag shared among other users will provide accurate information.
		IQ2	Geotag shared among other users will provide relevant information.
		IQ3	Geotag shared among other users will provide precise information.
		IQ4	Geotag shared among other users will provide timely information.
	Geotag System Quality	SQ1	I would find geotag secure enough to conduct information sharing.
		SQ2	Geotag provides convenient access
		SQ3	Geotag is easy to see
		SQ4	I could use geotag at anytime, anywhere I want
	Geotag Design Quality	DQ1	Visual graphics of geotag are user friendly
		DQ2	The font and design used for geotag are appropriate
		DQ3	The presentation style of geotag is easy to understand
		DQ4	Geotag is easy to read.
Source credibility	SC1	The person providing geotag about the destination was knowledgeable on tourism information.	
	SC2	The person providing geotag about the destination was trustworthy.	
	SC3	The person providing geotag about the destination was credible.	
	SC4	The person providing geotag about the destination training appeared to be an expert on this topic.	
Geotag Usefulness	USF1	I can decide more quickly and more easily which the destination I want to travel using geotag shared among other users.	
	USF2	I can better decide which the destination I want to visit the destination using the geotag shared among other users than in the past.	
	USF3	I am better informed about the destination using the geotag shared among other users.	
	USF4	I can decide more quickly and more easily whether I want to visit a particular destination or not using the geotag shared among other users.	
	USF5	I can better decide whether to visit a particular destination or not using the geotag shared among other users.	
Geotag Ease of use	EOU1	The interaction with geotag shared among other users is clear and understandable.	
	EOU2	When I obtain information about the destination, interaction with geotag does not require a lot of mental effort.	
	EOU3	When I obtain information about the destination, I find geotag easy to see.	
	EOU4	When I obtain information about the destination, I find it easy to get geotag shared among other users to do what I want it to do.	
Geotag Enjoyment	ENJ1	When I obtain information about the destination, I have fun interacting with the geotag shared among other users.	
	ENJ2	When I obtain information about the destination, the geotag shared among other users provides me with a lot of enjoyment.	
	ENJ3	When I obtain information about the destination, I enjoy referring to the geotag shared among other users.	
	ENJ4	When I obtain information about the destination, using geotag shared among other users does not bore me.	
Tourism information Adoption	ADP1	I intend to refer to geotag shared among other users within the next travel.	
	ADP2	I intend to refer to geotag share among other users in the near future.	
	ADP3	I intend to refer to geotag share among other users for a better choice of destinations.	

## **Contagion of Financial Crisis and Its Effect: A Comparison between China Market and the World Market**

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### **Abstract**

The paper studies the contagion of financial crisis and its effect between Shanghai market of China and the world market through linear model which take the inexpectant yield as investors' irrational behavior and consider the trading hours overlap. The following are research conclusions. 1) The contagion that Shanghai market made to the world market enhanced dramatically during American financial crisis. While the contagion decreased significantly during European debt crisis, but the stronger contagion effect still exists in the neighboring countries in the region. 2) The contagion of Shanghai market mainly came from the surrounding areas market and the American market having lag effect during subprime crisis. The contagion of Shanghai market made by European developed countries' market enhanced markedly during European debt crisis.

**Keywords:** Crisis Contagion, Linear Model, Financial Crisis



## **Economic Growth, Co2 Emission, Electricity Power Consumption, and FD in South Asian Countries**

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### **Abstract**

This paper has an extensive focus on the empirical relationship between co2 emission, economic growth, electricity power consumption, fossil fuel energy consumption and financial development of five south Asian countries. Findings indicate significant relationship found between co2 emission, electricity power consumption, economic growth and fossil fuel energy consumption and financial development in long run. Whereas granger casualty shows unidirectional association exist among co2 emission to electricity power consumption, co2 emission to fossil fuel energy consumption, electricity power consumption to fossil fuel energy consumption, financial development to fossil fuel energy consumption and financial development to economic growth and finally economic growth to fossil fuel energy consumption in short run. Impulse response analysis indicates electricity power consumption and fossil fuel consumption response positively with co2 emission but financial development and economic growth response negatively with co2 emission which is very strong and significant. In addition, variance decomposition indicates electricity power consumption put more durable and long lasting impact on co2 emission compare with other variables in this study.

**Keywords:** economic growth, co2 emission, electricity power consumption, financial development, co integration

## Do Investor Heuristics Drive IPOs' First-day Returns and One-year Post-listing Returns?\*

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### Abstract

This study investigates whether the difference of the IPO issuing companies' fundamentals impacts their price performance after listing. Empirical results indicate that the IPO issuing companies' fundamentals drive their first-day post-listing returns and one-year post-listing returns. Moreover, the heuristics used to determine whether the IPO of an issuing company with good fundamentals is good IPO with price appreciation potential show that IPOs with the best (worst) issuing companies' fundamentals have higher (lower) first-day post-listing returns.

**Keywords:** IPO issuing companies' fundamentals, IPO's price performance, investor heuristics

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## The Self-Determined Effect on Environmental Behavior-Using Public Transport as an Example

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### Abstract

The purpose of this paper is to develop a predictive model of consumer behavior in synthesizing the theory of planned behavior and consumer motivation. We investigate the influence of self-determination on the relationship between normative components and behavioral intentions, which represent the integration of the Theory of Planned Behavior (TPB) and the Self-Determination Theory (SDT), to provide a comprehensive understanding of the effects of intrinsically-based and extrinsically-based motivation on behavioral intentions. A total of 520 valid questionnaires in the context of public transport were used for the statistical analysis. The results show that attitudes and perceived behavioral control are important indicators to use public transport, respectively. The findings also highlighted that the environmental behavior of consumers with high levels of self-determination is strongly predicted by personal norms.

**Keywords:** Consumer Environmental Behavior, Theory of Planned Behavior, Self-Determined Motivation, Public Transport

## The Research on Lifestyle, Physical and Mental Health, and Potential Consumption for Elderly

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### Abstract

Sustainable development contains three aspects of development including social, economic, and environmental objectives. For the sustainable social issues, the aging society has considered as the major issue and challenging problem facing by the countries of the world. In addition to the diseases and functional decline, the interpersonal interaction, social participation, and mental health would affect the lifestyle of elderly. Given the increasing numbers of aging population, the mature market is developed globally, which changes the structure of elderly consumption and commercial opportunity.

With the help of Taichung City Government, a total of 600 effective samples of the survey of social and living status of the 65-75 years old elderly in Taichung City from the project of Global Research & Education on Environment and Society (GREENS) of Tunghai University were used to study the lifestyle of elderly and their values in life. The current study used cluster analysis to determine the homogenous characteristics of elderly. Furthermore, influencing factors of daily life conditions, diet, and health status of the elderly were investigated to discuss the differences of consumption patterns among elderly.

Measurement of the AIO (activities, interests and opinions) was used as a basis to access the status of lifestyle of elderly in Taiwan, and further to demonstrate the economic activities and market segmentation within the different characteristics of elderly.

**Keywords:** Mature market, Lifestyle of elderly, Cluster analysis, AIO measurement

# The Effect of Place Attachment on Island Holiday Destination Choice: A Structural Equation Modelling Analysis

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## Abstract

Various literatures on tourism marketing have discussed many relevant views with regards to place attachment, and how it affects consumer's decision and choice. Drawing from prior researches on place attachment, we adopted place dependence, affective attachment and place identity as multidimensional construct to explain place attachment. This paper is intended to fill the gap by empirically support the contributions of these independent variables towards explaining consumer choice particularly in tourism context. A total of 300 respondents were conveniently invited to participate in this study, however, only 215 questionnaires were returned and deemed usable for the study. The findings supports that place dependence have a significant direct effect on holiday destination choice.

**Keywords:** Tourism experience, Island Holiday, Place Attachment, Destination Choice

## **Market-Oriented Strategies of Apparel Retail Stores in South Korea and China**

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### **Abstract**

South Korean and Chinese apparel retailers currently face turbulent operating environments with growing consumer demands and mounting foreign competition, thus may need enhanced responsiveness to consumer demands through market-oriented strategies (MOS) and store structures favorable to MOS. We analyzed South Korean and Chinese apparel stores for effects of perceived environmental uncertainty on their MOS and organizational structure; and organizational-structure effects on MOS. We hypothesized positive effects, except negative organizational-structure effects on intelligence-generation, intelligence-dissemination, and response-design MOS. Korean and Chinese apparel-store managers completed questionnaires (40% and 45% response rate respectively), which measured respondents' perceived environmental uncertainty (market turbulence, competitive intensity) in their countries' apparel retailing; formalization, centralization and specialization organizational-structure dimensions; intelligence-generation, intelligence-dissemination, response-design, and response-implementation MOS; and sample demographics. Korea and China data were compared using t-tests. Both store-manager groups perceived fairly high market turbulence and competitive intensity (more competitive intensity in China than Korea). Both employ MOS somewhat (more in China than Korea) and under their countries' traditional hierarchical organizational structures, but not structures found favorable to MOS in past research. Our theoretical framework draws from contingency theory and the resource-based view in strategic management theory. Hypotheses were tested separately for each country using structural equation modeling and the data as modified in factor analysis. Goodness-of-fit measures supported the measurement models. In more significant cases for China than Korea, environmental uncertainty affects organizational structure and MOS, and organizational structure affects MOS. For China, market turbulence positively affects specialization and all MOS; competitive intensity negatively affects formalization and market-intelligence generation and dissemination, but positively affects specialization and designing and implementing responses to intelligence. For Korea, competitive intensity positively affects

formalization; market turbulence positively affects intelligence generation and response design. Specialization negatively affects intelligence generation and response design and implementation in China; formalization positively affects response implementation in both. China findings may suggest that environmental uncertainty leads store managers to, on one hand, increase specialization, perhaps to afford detailed market information, and on the other, loosen intra-store communication lines under intense competition but retain authority lines under market turbulence, perhaps to easily disseminate information that helps understand and respond to competition but to provide stability while doing so. Korea findings may imply that increased competition engenders tightened intra-store responsibility and communication lines, perhaps to ensure actions consistent with organizational goals in meeting competition. Results also may suggest that isolation from dispersing responsibilities deters collecting market intelligence and formulating and implementing appropriate responses, but clear authority lines facilitate response implementation. Implications involve possibilities that many Chinese and Korean apparel retailers employ MOS under traditional organizational structures that may be challenged in increasingly complex markets. Raising market-orientation levels may require increased structural flexibility to enhance responsiveness to consumer demands. Future research should address this issue, along with further analysis of these retailers' adoption of MOS and relationships to their store structures.

**Keywords:** Market Orientation, Apparel Retailing, China, South Korea, Organizational Structure

## I. Introduction

Business managers in China make decisions today under environmental uncertainty arising from changes in the country's economy such as fast-expanding consumer incomes and progressive opening to foreign competition and transformation from a command economy to a market economy with firms pushed to reconfigure their organizations and develop new skills, especially in marketing, to meet market demands (Kshetri, 2009). South Korea (hereafter Korea) is also undergoing great changes, among them consumer demand for lower prices and better value in their purchases than formerly and the growing number and diversity of competing companies, many foreign in view of Korea's market being open to such companies since the mid-1990s (Yu et al., 2011). The changes occurring in these countries raise questions about relationships among environmental uncertainty, organizational structure, and market orientation (MO) in Chinese and Korean companies. Past research on these relationships mainly concerns Western non-retail businesses. Our exploratory study addresses these issues with respect to Chinese and Korean apparel retailers. The objectives were to analyze and compare these retailers on the (a) effects of environmental uncertainty on their organizational structure and MO strategies; and (b) effects of the organizational structure on the MO strategies. Chinese and Korean apparel retailers are of interest to compare because their countries share similar cultures and changes in their business environments, but yet may differ in the variables and relationships we examine.

MO can help firms achieve superior performance through comprehending and responding to customer needs (Kirca et al., 2005). Despardé and Webster (1989) defined MO as an organizational culture with shared values and beliefs that put customers first in business planning. Kohli and Jaworski (1990) identified the basic behavioral MO strategies: generation of market intelligence relevant to current and future customer needs; organization-wide

dissemination of the intelligence; and the design and implementation of responses to the intelligence. Kohli and Jaworski also proposed factors (e.g., organizational structure, market turbulence, competitive intensity) that may influence MO and relationships with other variables. With China's retail market opening steadily to global competition and its increasing emphasis on domestic consumption, Chinese retailers recognize the need to modernize, innovate, and raise standards. Chinese companies have quickly learned MO from foreign firms (Cao & Hansen, 2006), but tend to be weak in marketing and MO (Kshetri, 2009). The environment in which Korean apparel retailers currently operate suggests that their success may rely increasingly on employing MO strategies to closely monitor and respond to consumer demands.

MO research is extensive (Kirca et al., 2005). Manufacturers have dominated the samples, but retailers have received increasing attention. Most studies exclude apparel retailers or include them in broad retail samples without reporting product-specific results. Elg (2007) argued that MO is more complex in retailing than manufacturing because (a) retailers consider product ranges, services, and facilities in deciding offerings; (b) store design and operation incorporate numerous variables such as product presentation and checkout service; (c) store location affects visibility and relationships with local markets; and (d) retailer-supplier relationships affect the prices, quality, timeliness, and brand image of retailers' products. Azuma (2004) emphasized MO uniqueness in fashion retailing. The currently prevalent short product cycles engender short-term MO horizons, and competitive advantage in the turbulent, fiercely competitive fashion market depends on innovatively monitoring and copying competitors. Such fierce competition exists in apparel retailing in both China and Korea today (Guild & Hu, 2011; Yu et al., 2011).

The samples in research on MO in retailing represent large to small firms and various countries. Many issues are examined. Some involve internal MO (the use of marketing techniques to align organizational services with customer needs) and effects on financial performance and customer satisfaction (e.g., Lings & Greenley, 2010). Others involving firms' inner workings related to MO include organizational size, structure (e.g., centralization), systems (e.g., manager, employee behavior), and innovation (Harris, 2000; Sternquist et al., 2010). Scholars have also analyzed retailer-supplier MO relationships (Chang et al., 2011; Elg, 2003, 2007; Sternquist et al., 2010) as well as MO effects on financial performance, customer retention, and product quality and success (Hwang & Norton, 2010; Medina & Rufin, 2009). Only the research on relationships between MO and organizational structure directly relates to ours. The studies of Chinese retailing (Chang et al., 2011; Sternquist et al., 2000, 2010) indicate MO adoption, but ignore apparel retailing and relationships we examine. Work on Korean apparel retailing (Hwang & Norton, 2010) shows MO adoption to some extent, but does not address relationships we examine.

## II. Main Body

### Theoretical Framework

Our theoretical framework for investigating relationships among environmental uncertainty, organizational structure, and MO strategies in Chinese and Korean apparel retailing (see Figure 1) is based on contingency theory and the resource-based view in strategic management theory, a theory coupling Pertusa-Ortega et al. (2010) found useful in analyzing environment-structure-strategy relationships. Contingency theory holds that contingency factors determine the characteristics of organizational structure (Pertusa-Ortega et al., 2010). Contingency factors



also influence the strategies chosen. Organizational structure refers to a firm’s conceptual and functional framework and its resource configuration; strategy refers to the firm’s vital missions, goals to be achieved, and principal uses of its resources (Hall & Saias, 1980). The focal strategies in our study are the previously indicated behavioral MO strategies.

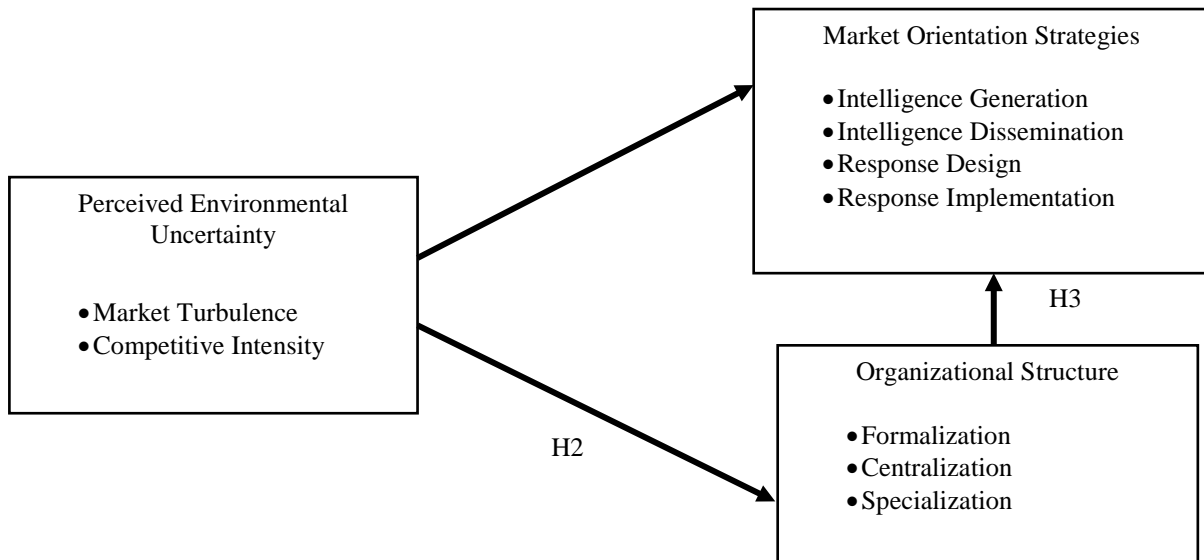


Figure 1. Theoretical Framework

Theorists (e.g., Kohli & Jaworski, 1990) have posited associations between MO and three dimensions of organizational structure: formalization, centralization, and specialization. Formalization is the extent to which rules define authority relations, communication, norms, sanctions, and procedures (Hall et al., 1967). Centralization involves the degree of delegation of decision-making authority within an organization (Aiken & Hage, 1968). Specialization, or departmentalization, refers to the number of departments into which organizational activities are divided (Jaworski & Kohli, 1993). Scholars have also delineated mechanistic and organic structures. The former has vertical hierarchies and interaction, much formalization, little decentralization, and many departments, procedures, and rules. Rich horizontal integration and less rigidly defined methods, duties, and power characterize organic structure (Marsden et al., 1994). Chinese and Korean firms reportedly have hierarchical, or mechanistic, cultures (Kirca & Hult, 2009; Realo et al., 1997). Contingency factors that affect organizational structure and strategy comprise the complex of external environmental conditions. Those considered in this study are competitive intensity and market turbulence, which can lead to environmental uncertainty and affect MO and relationships with other variables (Kohli & Jaworski, 1990).

**Literature Review and Hypotheses**

To remain competitive in uncertain and dynamic environments, firms must anticipate changes in their external marketing environments and be prepared to adapt business activities accordingly (Johnston et al., 2008). Davis et al. (1991) found that perceived environmental turbulence is positively related to a firm’s MO level. Kohli and Jaworski

(1990) noted that the more competitive a firm's operating environment, the more likely the firm will be market oriented. Diamantopoulos and Hart (1993) found competitive intensity to be a key environmental variable because customers in highly competitive business environments have multiple alternatives for satisfying their needs and wants. In such environments, firms tend to increase their sensitivity and responsiveness to customer needs (Lusch & Laczniak, 1987). Pelham and Wilson (1996) found, however, no effects of market dynamism and competitive intensity on the MO level of small firms, implying that MO is not crucial under some conditions. In addition, factors acting as antecedents to MO in one country may neither facilitate nor deter firms' MO in others (Burgess & Nyajeka, 2006). Partly due to the argument by Davis et al. (1991) that environmental changes not only create need for entrepreneurial and market orientations, but also drive them. On the basis of the literature, we hypothesized that

**Hypothesis 1:** Positive effects of perceived market turbulence and competitive intensity on each behavioral MO strategy (intelligence generation and dissemination and response design and implementation).

Research on organizational adaptation from a contingency perspective (e.g., Hrebiniak & Snow, 1980) shows much external-environment influence on organizational structure. Several studies (e.g., Huber & Daft, 1987) indicate environmental uncertainty effects on organizational structure and processes. The environmental turbulence level is critical to firms' survival and growth. Unfavorable and hostile environments challenge even firms with flexible structures and responsiveness to environmental changes (Covin & Slevin, 1989). On the basis of the literature, we hypothesized

**Hypothesis 2:** Perceived market turbulence and competitive intensity positively affect each organizational-structure dimension (formalization, centralization, and specialization).

Kohli and Jaworski (1990) found that centralization impedes MO, but departmentalization and formalization have no impact on MO. Burgess and Nyaheka's (2006) research showed no effect of formalization, departmentalization, or centralization on MO. Matsuno et al. (2002) found a negative effect of departmentalization, but no effect of formalization and centralization, on MO. Harris (2000) found a negative MO-centralization relationship in retailing. Deshpandé and Zaltman (1982) posited an inverse relation between market-intelligence utilization and both formalization and centralization. Stampfl (1978) proposed that both formalization and centralization are inversely related to a firm's responsiveness. Zaltman et al. (1973) drew on numerous studies to argue that formalization, specialization, and centralization may all be inversely related to intelligence generation and dissemination as well as response design, but positively related to response implementation. On the basis of the literature, we hypothesized

**Hypothesis 3:** Each of three dimensions of organizational structure (formalization, centralization, and specialization) negatively affects the intelligence generation and dissemination and response design MO behavioral strategies, but positively affects response implementation.

### III. Method

#### Sampling and Data Collection

We received permission for research with human subjects from the institutional review board at one of our universities before any data collection. Primary data were collected with similar self-administered questionnaires sent to top managers of randomly drawn apparel retail stores (500 in China, 1,000 in Korea) in Beijing, Guangzhou, Qingdao, Shenzhen, and Tianjin in China and Busan, Daegu, Deajeon, Seoul, and Suwon in Korea, all major cities or towns. The Chinese stores were drawn from the *China Business Directory*, *China Yellow Pages*, *White and Yellow Pages China*, and *China Chain Store and Franchise Association* and the Korean ones from three Korean sources: *A National Department Store Yearbook*, *Fashion Retail Guide Book*, and *Korea Fashion Brand Yearbook*. A minimum of about 200 respondents was needed for the structural equation modeling used in data analysis. Based on previous research, a response rate of 20-25% was expected, a rate requiring a target sample of about 500. The questionnaires and cover letters were written in English, translated respectively into Chinese and Korean, and back translated into English to avoid loss of meaning. They were sent by e-mail or by mail with postage-paid return envelopes to stores without e-mail addresses. Questionnaires could be returned by e-mail or mail. Two weeks after the initial mailings, a reminder postcard was sent to each store, followed by re-mailing the entire package to store managers who did not respond within three weeks of the first mailings. Each questionnaire contained scales to measure the research variables, questions requesting demographic information on respondents and their stores, and a screening question on whether respondents' stores carried apparel merchandise.

#### Research Methodology and Construct Development

Two scales with four and six items respectively were used to measure, from strongly disagree (1) to strongly agree (5), market turbulence and competitive intensity. The market-turbulence items, adapted from Jaworski and Kohli (1993), addressed the perceived degree of change over time in a store's customers and their preferences or purchase criteria. The competitive-intensity items, adapted from Khandwalla (1972, 1977), addressed the perceived degree of competition from other Chinese or Korean apparel retailers generally and from key competitors. Lawrence and Lorsch (1967) argued that perceived, not actual, competition level affects managers' decisions in response to their firms' operating environment. Other items measured three organizational-structure dimensions and four MO strategies. Specialization was measured with four items adapted from Inkson et al. (1970), Khandwalla (1974), and Pugh and Hickson (1976), each with a 5-point scale between two polar statements to complete the phrase "In general, the management philosophy in my store favors." Formalization and centralization were each measured, from strongly disagree (1) to strongly agree (5), with three items adapted from scales developed by Aiken and Hage (1968) and Ferrell and Skinner (1988). Using the same 5-point response scale, the following MO strategies were measured with items adapted from Jaworski and Kohli (1993): intelligence generation (3 items), intelligence dissemination (5 items), and response design and implementation (3 items each).

The Chinese questionnaire was pilot tested with 10 Chinese retail store managers and 3 faculty members, 2 at a Chinese university and 1 at a U.S. university; the Korean one with 10 Korean store managers and 5 Korean

university faculty members. Managers were asked to complete the questionnaire; they and the faculty were asked to assess the content, wording, comprehension, completion time, and appropriateness. Suggested changes were made.

#### IV. Conclusion

##### Samples and Preliminary Data Analysis

For China, we received 227 completed questionnaires (45.4% response rate) from presidents (53.3%), assistant managers (26.0%), and managers (20.7%). Many stores (50%) opened over 2007-2009, the rest over 2000-2006. Most (67%) had less than 10 employees. For Korea, we received 400 completed questionnaires (40% response rate), mainly from shop managers (53.3%), presidents (16.3%), sales persons (15.8%), and assistant managers (6.0%). Many stores (54%) opened over 2000-2004, the rest over 1980-1999. Most (61%) had less than 5 employees.

The overall means for market turbulence and competitive intensity are respectively 3.72 and 3.91 for China and 3.47 and 3.28 for Korea. Those for intelligence generation and dissemination are 3.44 and 3.85 for China and 3.32 and 3.41 for Korea; for response design and implementation, 3.88 and 4.22 for China and 3.47 and 3.59 for Korea. The means for centralization ( $m = 2.75$ ), formalization ( $m = 2.89$ ), and specialization ( $m = 3.54$ ) for China suggest fairly centralized and formal and even more specialized store structures. Those for centralization ( $m = 3.26$ ), formalization ( $m = 3.06$ ), and specialization ( $m = 3.24$ ) for Korea suggest fairly centralized, formal, and specialized store structures. Thus, apparel store managers in China and Korea employ MO to some extent and under more mechanistic than organic organizational structures, reflecting the countries' hierarchical business structures, but not the structures found amenable to MO in past research. Independent sample t-tests on the mean scores for China and Korea showed significant differences for all variables but market turbulence and intelligence generation. The mean is higher for China than Korea in each significant case except formalization and centralization, suggesting less formal and centralized, but more specialized store structures, and greater perceived competitive intensity and adoption of most MO strategies in China than Korea.

Our data are from one respondent per store; thus we tested for common method bias following Podsakoff and Organ (1986). Results from correlation and principal components factor analyses showed no evidence of such bias. To assess reliability, we first calculated the Cronbach alpha unidimensional reliability score for each measurement scale. A score of .70 is a commonly used threshold value for acceptable reliability, although not an absolute standard; values below .70 are considered acceptable in exploratory research like ours (Fornell & Larcker, 1981). The Chronbach alphas of 0.79, 0.85, and 0.67 for China and 0.69, 0.76, and 0.52 for Korea for respectively the environmental-uncertainty, MO, and organizational-structure scales indicate reasonably good reliability. Composite reliability (CR) and convergent and discriminant validity (CV, DV) were assessed following Fornell and Larcker (1981). CR values above .60 indicate acceptable reliability. Those for the scales in this study ranged from .62 to .95 for China and from .70 to .89 for Korea, indicating acceptable composite reliability. Average variance extracted (AVE) was used to assess CV and DV. AVE value of .50 or more indicates convergent validity. AVE values for the six scales ranged from .55 to .71 for China and from .62 to .72 for Korea, indicating convergent validity. Comparing the AVE square root to the correlation between constructs assessed DV. Discriminant validity is indicated when the AVE square root exceeds the correlation between constructs, as found for each of the six scales for each country.

### **Factor Analysis**

Exploratory factor analysis with varimax rotation was conducted on the data on each variable to extract the relevant latent variables. Factor analysis was found appropriate with KMO values of .662 for China and .699 for Korea for environmental uncertainty, .679 for China and .632 for Korea for organizational structure, and .703 for China and .809 for Korea for MO, along with statistical significance ( $p = .001$ ) of each value in Bartlett's test of sphericity. Eigen value of 1 or more was the criterion for selecting extracted factors. The factor analysis retained eight of the nine original variable categories, although several items shifted among factors or were deleted. Results for the centralization factor led to disregarding this factor in later analysis. Space limitations prevent presentation of the detailed results of the factor analysis. These results are available from the first author upon request.

### **Overall Fit of the Measurement Models**

The overall fit of the measurement models was assessed by six absolute goodness-of-fit measures (chi square, chi square/degrees of freedom, standardized root mean square residual, root mean square error of approximation, goodness-of-fit index, and goodness-of-fit index adjusted for degrees of freedom); three incremental fit measures (normed, comparative, and incremental fit indices); and three parsimonious fit measures (parsimony goodness-of-fit, relative fit, and parsimony normed fit indices). Values found for these measures indicated no reason to reject the models and led to concluding that they fit the data well and reasonably well approximate the sample data. Detailed results are available from the first author upon request.

### **Hypothesis Testing and Discussion of Results**

We tested the three hypotheses for China and Korea using structural equation modeling (SEM) and the data as modified in the factor analysis. SEM allows simultaneous testing of the effects of exogenous constructs on endogenous constructs and of endogenous constructs on each other, as well as relationships among exogenous constructs. This study includes two exogenous variables, the two environmental-uncertainty aspects (market turbulence, competitive intensity), and six endogenous variables, the four MO strategies (intelligence generation and dissemination, response design and implementation) and two organizational-structure dimensions (formalization, specialization). The correlation matrix for all variables for both China and Korea showed that 24 of the 28 correlations among them were significant at  $p < 0.01$  or 0.05, fulfilling a pre-condition for SEM.

SEM results are in Tables 1 and 2. Although they do not support H1 as stated for either country, environmental uncertainty has significant, positive effects on MO strategies in six of the eight tested cases for China but only two for Korea. For China, market turbulence positively affects all four MO strategies as hypothesized, but for Korea only intelligence generation and response design; thus, as in Davis et al. (1991) and Jaworski and Kohli (1993), the more (less) the perceived market turbulence, the more (less) Chinese managers gather, disseminate, and design and implement responses to market intelligence, and the more (less) Korean managers gather and design responses to the intelligence. The hypothesized positive effects of competitive intensity were found only for response design and implementation for China, indicating that the more (less) the perceived competitive intensity, the more (less) Chinese managers design and implement responses to market intelligence. These results may reflect the greater MO

activity in China than Korea in the face of no significant difference between the two countries in market turbulence perceived, but greater competitive intensity perceived in China than Korea. However, competitive intensity does not affect MO strategies in Korea, but negatively affects intelligence generation and dissemination in China; thus the more (less) the perceived competitive intensity, the less (more) Chinese managers gather and disseminate market intelligence.

SEM results also do not support H2 as stated for either country, but as found by Hrebiniak and Snow (1980) and Huber and Daft (1987), some significant effects of environmental uncertainty on organizational structure surfaced. As hypothesized, both market turbulence and competitive intensity positively affect Chinese store specialization, and competitive intensity positively affects Korean store formalization; thus, the more (less) the perceived market turbulence and competitive intensity, the more (less) specialized the Chinese apparel store structures, and the more (less) the perceived competitive intensity, the more (less) formal the Korean store structures. However, competitive intensity negatively affects Chinese store formalization, indicating that the more (less) the perceived competitive intensity, the less (more) formal the store structures in China. Given that apparel store managers perceive greater competitive intensity in their market and have more structurally specialized stores in China than Korea, it may be no surprise that competitive intensity positively affects the specialization level of Chinese stores and does not affect that of Korean stores. It is interesting, however, that despite lower competitive intensity perceived in Korea than China, competitive intensity positively affects the formalization level of the Korean stores, but negatively affects that of Chinese stores.

**Table 1.**  
**China: Results of SEM estimation for hypothesis testing**

Dependent variables	Independent variables	Estimate	Standard error	Critical ratio	p value
<b><i>Market-orientation strategies</i></b>	<b><i>Environmental uncertainty</i></b>				
Intelligence generation	Market turbulence	.769*	.127	6.049	.001
Intelligence dissemination	Market turbulence	.654*	.087	7.482	.001
Response design	Market turbulence	.328*	.086	3.815	.001
Response implementation	Market turbulence	.500*	.108	4.642	.001
Intelligence generation	Competitive intensity	-.503*	.108	-4.669	.001
Intelligence dissemination	Competitive intensity	-.345*	.074	-4.658	.001
Response design	Competitive intensity	.363*	.073	4.980	.001
Response implementation	Competitive intensity	.866*	.091	9.486	.001
<b><i>Organizational-structure dimensions</i></b>	<b><i>Environmental uncertainty</i></b>				
Formalization	Market turbulence	-.161	.062	-2.586	.010
Specialization	Market turbulence	.880*	.057	15.515	.001
Formalization	Competitive intensity	-.853*	.048	-17.944	.001
Specialization	Competitive intensity	.253*	.043	5.849	.001
<b><i>Market-orientation strategies</i></b>	<b><i>Organizational-structure dimensions</i></b>				
Intelligence generation	Formalization	-.269	.094	-2.868	.004
Intelligence dissemination	Formalization	.102	.065	1.586	.113
Response design	Formalization	.092	.063	1.451	.147
Response implementation	Formalization	.325*	.080	4.087	.001
Intelligence generation	Specialization	-.450*	.103	-4.372	.001
Intelligence dissemination	Specialization	.037	.071	0.524	.601

Response design	Specialization	-.254*	.070	-3.646	.001
Response implementation	Specialization	-.417*	.087	-4.781	.001

\*Significant at  $p < .001$ .

SEM results also do not support H3 as stated for either country, but some significant effects of organizational structure on MO strategies were found for each. As hypothesized, formalization positively affects response implementation in both Chinese and Korean stores, and specialization negatively affects intelligence generation and response design and implementation in Chinese stores; thus, the more (less) formal the Chinese and Korean store structures, the more (less) the managers implement responses to market intelligence, and the more (less) specialized the Chinese apparel store structures, the less (more) the managers gather, design, and implement responses to market intelligence. The positive formalization–response implementation relationship for both China and Korea is interesting in that we found more formal store structures, but less adoption of the response-implementation MO strategy in Korea than China. The positive formalization–response implementation relationship agrees with Jaworski and Kohli’s (1993) findings, but inconsistent with our results, they found formalization to be negatively related to response design. Further, our results agree with the Matsuno et al. (2002) finding that specialization negatively affects MO and with the argument by Zaltman et al. (1973) that specialization is inversely related to intelligence generation and response design. However, the lack of significant relationships between formalization and intelligence generation and dissemination in our study disagrees with Matsuno et al. (2002) results.

## Conclusions

Surveyed store managers in China and Korea perceived fairly high market turbulence and competitive intensity, although the latter more in China. This is not surprising given the booming growth and rising competition, including from foreign firms, in apparel retailing in China and Korea. In addition, surveyed managers have implemented MO strategies to some extent, but the most in China, perhaps reflecting Cao and Hansen’s (2006) finding that Chinese firms have quickly learned MO strategies. The largely mid-range mean scores we found for MO strategies in China and Korea may suggest that the surveyed managers are in transition toward increased MO levels, an advisable strategy under the fierce competition in their apparel retail markets.

**Table 2.**  
**Korea: Results of SEM estimation for hypothesis testing**

Dependent variables	Independent variables	Estimate	Standard error	Critical ratio	$p$ value
<b><i>Market-orientation strategies</i></b>	<b><i>Environmental uncertainty</i></b>				
Intelligence generation	Market turbulence	.285*	.068	4.202	.001
Intelligence dissemination	Market turbulence	.201	.067	2.973	.003
Response design	Market turbulence	.431*	.073	5.906	.001
Response implementation	Market turbulence	.193	.074	2.619	.009
Intelligence generation	Competitive intensity	-.030	.049	-0.624	.532
Intelligence dissemination	Competitive intensity	.018	.048	0.382	.702
Response design	Competitive intensity	-.117	.052	-2.254	.024
Response implementation	Competitive intensity	.051	.053	-0.975	.330
<b><i>Organizational-structure dimensions</i></b>	<b><i>Environmental uncertainty</i></b>				

Formalization	Market turbulence	.090	.064	1.403	.161
Specialization	Market turbulence	.109	.073	1.501	.133
Formalization	Competitive intensity	.188*	.045	4.181	.001
Specialization	Competitive intensity	.090	.051	1.764	.078
<b>Market-orientation strategies</b>	<b>Organizational-structure dimensions</b>				
Intelligence generation	Formalization	.057	.056	1.008	.313
Intelligence dissemination	Formalization	.065	.056	1.162	.245
Response design	Formalization	-.052	.060	-0.869	.385
Response implementation	Formalization	.219*	.061	3.585	.001
Intelligence generation	Specialization	.113	.050	2.262	.024
Intelligence dissemination	Specialization	.116	.049	2.352	.019
Response design	Specialization	.105	.053	1.960	.050
Response implementation	Specialization	.106	.054	1.967	.049

\*Significant at  $p < .001$ .

Past research on the relationships we examined has mainly focused on Western manufacturers, making it striking that many of our results agree with those in past studies. Examples are the mostly positive effects of environmental uncertainty on MO, albeit more in China than Korea, implying increased MO activity in response to the uncertainty. Also striking is that the MO activity seems to occur under more mechanistic than organic organizational structures. The pattern found in extant research is that organic structure is most amenable to MO. This pattern may pertain more to Western businesses than to counterparts in Eastern countries like China and Korea where hierarchical structure is culturally embedded.

Although for China we found positive effects of competitive intensity and market turbulence on structural specialization, we found a negative or no effect of competitive intensity and market turbulence respectively on formalization. These results may suggest that environmental uncertainty leads apparel store managers in China to, on one hand, increase specialization in their stores, perhaps to afford a finely grained view of market elements, and on the other hand, loosen communication lines in their stores in the face of intense competition but maintain existing authority lines in the face of market turbulence, perhaps to ease dissemination of information that will help employees understand and respond to the competition but to provide stability as they deal with market changes. For their part, Korean apparel stores' formalization level is affected by only competitive intensity and positively so. This effect, opposite the negative formalization– competitive intensity relationship for China, may imply that Korean store managers react to increased competition by tightening the strictness of responsibility and communication lines, perhaps to ensure that actions taken to meet competition are focused and consistent with organizational goals. Our results also show that specialization negatively affects intelligence generation and the design and implementation of responses to market intelligence in Chinese stores, but formalization positively affects the implementation of responses to the intelligence in both Chinese and Korean stores. These relationships may suggest that isolation from spreading responsibility across departments makes it difficult to gather market intelligence and formulate and put into practice responses to the intelligence, but that well defined authority lines in a store facilitate the implementation of responses to market intelligence.

## Implication



Implications of this research relate to the possibility that many apparel store managers in China and Korea are practicing MO strategies under traditional mechanistic organizational structures. The increasing complexity and rapid change in their markets may bring ever more challenges to traditional management systems. These apparel store managers may need to increase the flexibility of their organizations to raise their MO activity level to be able to respond well to environmental changes in their markets. Future research on Chinese and Korean apparel retailers should address this issue, along with further analysis of the implementation of MO strategies and the relationship to their organizational structures.

### Acknowledgements and Legal Responsibility

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# Shariah Compliance Hotels: Establishing A New Operation Paradigm to Serve the Muslim Travellers

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## Abstract

The hospitality industry is known to be a significant source of income for Malaysia. The country in 2014 secured the first spot as the world's top Muslim-friendly holiday destination receiving more than 500million tourists from the Gulf nations. Due to an aggressive growth in the hospitality industry, several numbers of initiatives have been launched in the country in order to continuing boosting its progress. One such move is through the innovation of several tenets of the sector which is commanded by the hotels services. New operation strategy such as the implementation of Shariah principles in hotels operation and services is making a mark among the hoteliers. The implementation of Shariah concept and rule means that the local hotel sector is able to provide something new to tourism in accordance to teaching of Islam in order to meet the requirement of the lucrative Muslim travellers market. However, such approach is still a new concept among hoteliers in Malaysia thus they still has yet to have a clear guidelines on how best operate with the Shariah concept in their organization. The purpose of this research is to further understand the concept of Shariah compliance operations in local hotels. This research was done qualitatively through interviews with the top management of Tabung Haji hotel located in Penang, Malaysia. This hotel is the first hotels chain in Malaysia which managed to obtain the status of Shariah Compliance Hotel (SCH). The whole research was focused on the main functional elements of the hotel operation which included housekeeping, human resource, supply chain, food and beverage. Results showed how SCH has its own operation model that supported the tenets of Shariah laws while thoroughly ensuring halal knowledge transfer and adequate awareness level within the organization to ensure proper implementation and to sustain the propagated operating strategy.

# **Business Turnaround in Thailand: An Exploration into the Impact of Indigenous Management Culture**

**James Jain<sup>a,\*</sup>, Tim G. Andrews<sup>b</sup>**

## **I. Introduction and Problem Statement**

The health of a business is not guaranteed forever. Virtually all businesses will face the daunting task of managing the recovery of a failing business some time in its life. Some may face it multiple times. Every business during the course of its existence will experience a near death or bankruptcy experience. This is a period characterized by harsh business conditions; low sales, low employee morale, low cash, low market share, and low innovation. Some recover from this and bounce back stronger than before, and some don't.

Like every developing economy, Thailand too has its share of successful businesses and business failures. While success stories are celebrated by all business failures are rolled under the carpet. However, there are some businesses which were probably looked like to be doomed, rise like mythological phoenix bird.

Majority of turnaround research up to now has been undertaken in European and US firms. There is a dearth of literature in other non-western contexts (Schoenberg, R. et al, 2013). In the Western contexts there are a number of key activities that firms in decline undertake in order to address trends of decline namely cost efficiencies (Bibeault, D. 1982), (Grinyer & Mckiernan, 1990), (Sudarsanam & Lai, 2001).

There had been numerous corporate turnarounds in Asia and other emerging markets around in Asia and rest of the world in South America and Africa. However, turnaround literature on such corporate recoveries in these parts of the world is too few compared to papers written among US based and Europe based company turnarounds. This comprises a major caveat in that contextual differences are mooted to influence pervasively the various aspects of the turnaround process – for example culture and its effect on superior-subordinate behavior. This paper focuses on Thailand. There are not many research papers dealing with turnarounds in Asia especially in the emerging Asian markets like Thailand. The few studies that have been done in Asia highlight the differences between turnaround models that are applied in Asia compared to the US. Addressing this gap in knowledge is important given both the macro-cultural, social and economic variations and also the more specific cultural and structural differences between Western and emerging East Asian contexts as outlined in the relevant literature (e.g. Bruton, and Ahlstrom (2001); Bruton, et al. 2003)

One of the early studies by Bruton et al. (2001) noted differences between the US model of turnaround and Asian turnaround in several areas such as problem recognition, the use of retrenchment, the change of CEO as well as the speed of turnaround. A further research confirmed that US model turnaround has limits in Asia due to the role of strong-owner managers and the importance of relationship among business people (Bruton, et al. 2003). O'Neill et al (2004) researched on impact of different types of ownership structures on firm turnaround in a sample of

28 Thai firms. They found significant differences between privately owned enterprises and state-owned enterprises in terms of corporate entrepreneurial behavior and work efforts.

### **1.1 Research Questions and Justification**

These focus on exploring the extent to which the major findings from Western turnaround models apply and with what effect in the emerging and transitional Southeast Asian context - specifically in Thailand. With reference to my pilot case company the broad questions include:

- 1) What were the initial actions taken in the turnaround effort especially in the area of cost efficiencies?
- 2) What were the subsequent steps taken and whether they are strategic or operational in nature?
- 3) Were there any major / minor changes in top management during the turnaround?.
- 4) What was the role of timing in the turnaround efforts?
- 5) What are the challenges faced by firm and in working out turnaround and whether any major difference from a western model of turnaround?
- 6) What was the embedded role of Thai indigenous business and societal culture norms/values?

### **1.2 Research Gap**

Several studies conclude that there are some Important differences between primarily Western based turnaround models and South East Asian empirical and organizational contexts – particularly in the realms of development and cultural dissimilarity. Nonetheless, there is still insufficient number of research in this region. Particularly there is a lack of investigation at the micro-political level on specific aspects of why, how, and to what extent there remain differences in the practice of turnaround in the Thai organizational context.

#### **Internal causes of decline**

Researchers have focused on two general factors: success and maturity (Whetten 1987) when considering internal causes of decline. Successful organizations with long periods of continuous growth may develop a sense of infallibility. (Nystrom and Starbuck, 1984; Hambrick and Crozier, 1985).

Organizations may become complacent and fail to do market research, product development, quality control, positioning and other elements of necessary to sustain growth. Success may blind organizations to environmental changes (Miller and Friesen, 1984; Weitzel and Jonsson, 1989). Such failure to respond to changes in environment will eventually lead to decline.

#### **External Causes of decline**

Decline of a firm may also be due to external changes. If a decline is a function of external forces, there must have been changes in the environment in which an organization operates. The change may have been in the macro environment, in the industry environment or both. Schendel (1976), Biebault (1982) and Ford (1985) have recognized macro environmental changes lead to an organization's decline. Such macroeconomic changes could be but not limited to (1) a general economic downturn where the purchasing power of people have declined, like in 2011 onwards occurring that are happening in many parts of Europe and the US. (2) Increase in the cost of capital or other important inputs (Freeman 1990). In the first scenario where the general economic conditions deteriorate people may either postpone purchases or go for substitutes.

### **Turnaround Strategies**

Turnaround strategies normally involve cost efficiencies, asset retrenchment, focus on core activities, building for the future, C.E.O. change and culture changes. This paper looks at impact of local culture in such turnaround situation.

### **Culture Change**

In concert with leadership change, the role of culture change in facilitating the rejuvenation and re-adaptation of the struggling firm is highlighted in the literature. It may be important to cause a change in culture to challenge past beliefs and taken for granted assumptions, which may be no longer be relevant to the current environment the firm is facing. Only then can historic operating routines can be abandoned and new employee behavior is adopted.

Stopford & Baden –Fuller 's (1990) study of rejuvenation in the declining UK manufacturers showed that when the CEO and TMT challenged past beliefs, it acted as a signal to employees that this behavior was not acceptable and led to the generation of innovative solutions that would not have been otherwise possible..

### **Thai business and societal culture**

Thai culture is complex and quite distinct from the cultural norms and values predominant in the West. Thais themselves are aware that foreigners often do not understand, or have sufficient knowledge of, their culture and hence unable to follow the unwritten rules for proper behavior". (Nimanandh.& Andrews. socio-cultural context, *The Changing face of Management in Thailand*, Page 57, 2009).

Thai culture plays a significant and overreaching influence on business dealings. There are two primary angles from which a culture can be understood. 'From the outside in ' or "etic" account and 'from an inside out' or "emic" account.

For 'etic' or from outside in view of Thailand, we use the works of three most influential models on culture – namely those from Hofstede (1980), Hall (1976) and Trompenaars (1997). According to Nimmanandh & Andrews, (2009) and Andrews & Chompusri (2013), Integrating the above mentioned three models, Thailand is relatively

- Collectivist;
- Hierarchical;

- Relations-based; and
- High context.

### **From outside in : etic dimension of culture**

• The highly influential concepts of high and low context was presented by Hall(1976) in a way of recognizing the and understanding cultural orientations. A high – context communication can be defined as one in which most of the information is already in the person, while very little is in the coded, explicitly transmitted part of the message. By contrast, a low- context communication is just the opposite, ie, the mass of the information is vested in the explicit code (Samovar and Porter, 1995. Page.101).

### **From the inside out: emic dimensions of culture**

- Kreng jai
- One of the most important and intriguing of Thai concepts is the term Kreng jai. Which is hard to translate and explain in English because such a concept does not exist in the Western world (Toews & McGregor, 1998). It can be roughly translated as “an attitude where by an individual tries to restrain his or her own interest or desire in situations where there is the potential for discomfort and conflict, and where there is a need to maintain a pleasant and cooperative relationship’ (Nimmanandh & Andrews,,2009, p.67). Kreng jai involves being aware of another person’s feelings, saving the face of others and respecting them (Niratpattanasai 2000).

### **Culture and Turnaround**

Culture like in life pays a prominent role in business turnarounds. Some cultures respond to crisis faster by nature and others slower. The type of respond also may vary. In a study of Malaysian turnaround by Sim(2009) demonstrates in the Malaysian context, he writes “ turnaround in the East Asian context is different from the North American and British contexts. Differences were found among our Malaysian firms in the nature and speed of the turnaround, the use of personnel lay-off and downsizing, and the impact of ownership and government. The context, particularly ethnic-cultural and institutional factors, emerged as a key determinant of turnaround and provided both constraints and opportunities for turnaround efforts”.

### **Expectations and propositions**

The extant literature emphasizes the broad differences between Western firms and East Asian firms. Their findings are still inconclusive. Just as differences exists between among businesses practices of Western Europe, there are differences between business practices of different countries in Asia. One of the reasons could be explained by institutional theory. Institutional theory focuses on deeper meaning of and resilient aspects of social structure.

### **Methodology**

## Research Approach

To explore an in-depth understanding of turnaround in Thai social context, the case study method has been chosen. A qualitative research would follow various quantitative methodologies that were suggested by many researchers, as well as follow Yin (2009) by using the iterative theory building (Eisenhardt, 1989; Kerssens-van, 2001, Eisenhardt and Graebner, 2007; and Yin, 2009). According to Yin (2009), case study goals are for learning the contemporary events, which it would be coherent on this dissertation objective to explore an in-depth understanding of Thai social cultural impact on turnaround of organizations. Bruton et.al. (2003) states that “even when pressured with strong outside pressure the institutions carried by strong culture of overseas Chinese business people in East Asia still limit the actions that are understood as important to firms undertaking a turnaround in the West. Thus there is a need for greater understanding of this environment and how firms there actually implement actions such as corporate turnaround”. Bruton et. Al (2001) concludes that turnaround effort must be consistent with the local settings to be successful.

## Discussion

One interesting finding was how the ‘family style’ meaning attached to the company survived and prospered, at least in mutated form, is a major facet of the company’s longer term turnaround and change. Prior to the crisis the company was a family unit in the biological, blood-related sense of the term connected to this status the apparent ‘lack of any system’.

second major finding concerned the nature of the superior- subordinate relationships, the extent of its influence on the successful turnaround process and the underplayed way in which it helped their success. The input of this rapport is well documented in the literature and its personal, paternal avuncular aspect was clearly and repeatedly discussed among my respondents

## Implications for Future work/research

whereas the expectation is that a strong, patriarchal, Asian leader at the head of a local, top-down Thai SME would slow down the process of turnaround, we found that this process was speeded up as result of local culture norms creating the conditions within which a certain style of control and power well suited to a quick response could work in a highly effective manner.

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# **Performance Appraisal Effect on Positive Psychological Capital: Samples of the employees in the sales department of financial institutions in Indonesia**

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## **Abstract**

Human capital has become a key factor for a successful and sustainable organizational performance, including financial organizations or institutions. The four positive psychological capacities of confidence, hope, optimism, and resilience are measurable, have enough room for further development, and can be managed for more effective working performance. Several empirical studies have found positive relationship between psychological capital and performance, job satisfaction, and organizational commitment, other studies have found that employees dislike performance appraisals. The studies also said that there are insignificant correlation between performance appraisal discomfort and performance appraisal belief, inverse relationship between performance appraisal discomfort and perceived stress. This study is conducted to find whether performance appraisal effect to positive psychological can be found. For this study, descriptive analytical method will be proven with hypothetical test. Sample will be collected from a questionnaire answered by employees specifically sales employees from Indonesian financial institute. From the result of the study, performance appraisal has an effect on positive psychological capital.

**Keywords:** Performance Appraisal, Positive Psychological Capital

# **Impact of Balanced Scorecard: A Case Study of a Water Utility Company**

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## **Abstract**

Balanced Scorecard (BSC) was developed by Kaplan and Norton (1992) to integrate financial and non-financial measures in response to criticism of using financial measures solely. There were many organizations adopting BSC but they might have imitative behaviour and implement BSC blindly, not knowing BSC's impacts. It is questionable that whether they really understand the functions, advantages and disadvantages of BSC. The purpose of this paper is to seek deeper understanding on the impacts of BSC in terms of performance and strategic achievement, besides the benefits and shortages of BSC. This research is significant to all the practitioners who intent or have implemented BSC to comprehend the impacts of BSC on the organization. The paper adopted a case study approach involving a water utility company in Malaysia. In-depth interviews were held with senior managers and supported by quantitative approach. The results have shown that BSC's advantages outweigh its disadvantages. It is used as a strategic management tool to cascade down to employees and translate into their targets. There were improvements of the company's financial performance. It is recommended for future research to include more companies from different backgrounds in the qualitative research to make a better generalized conclusion about the impacts of BSC implementation in the companies. Future research should use other ratios besides the three ratios used in this study. Also, it is suggested for future research to test the impacts of BSC from the perspective from ground level employee. In sum, BSC is a useful tool to be implemented in an organization to achieve its strategy and improve its performance. This study contributes to the existing literature, specifically on the knowledge about the impacts of BSC in Malaysian company context.

**Keywords:** Balanced Scorecard, financial measure, non-financial measure, performance

## **Investigating Cruisers' Activity-Based Segmentation**

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### **I. Introduction**

Over the past decades, cruise lines have experienced an exponential growth which has become one of the dynamic sectors within the hospitality and tourism industry. One of the current trends is that cruise lines are expanding their target markets to younger adults who can be prospective loyal consumers. In their pursuit of new consumers, cruise lines provide various activities that appeal to target consumers' life styles and emphasize on a unique cruise experience that can be differentiated from their main competitors. For example, the Carnival Cruise Line emphasizes its 'Fun Ships' concept, while the Norwegian Cruise line promotes their 'Freestyle Cruising'. However, competing cruise lines can duplicate these tactics and offer similar products and services which generate a challenge to differentiate among themselves (Kwortnik, 2006). Although cruise lines have utilized those offerings as a means to gain sustainable competitive advantages in the marketplace, it is uncertain whether those are effective in delivering a favorable cruise experience and developing a long-lasting brand relationship (Véronneau, 2009). Thus, this study will examine how consumers evaluate their experiences and make a decision for a cruise line. The specific objectives of this research are to: 1) investigate consumer segments that prefer different experiential appeals associated with cruise brands; and 2) explore the relationships between brand attributes and cruise passengers' consumption behaviors.

This study will apply brand experience constructs developed by Brakus, Schmitt, and Zarantonello (2009). In their study brand experience is conceptualized as four dimensions of customer response, including sensory, affective, behavioral and intellectual. A sensory dimension refers to visual, auditory, olfactory, and tactile aspects of a brand; an affective dimension includes specific feelings and emotions generated by a brand; an intellectual dimension stimulates customers' convergent and divergent thinking triggered by a brand; a behavioral dimension is related to bodily experiences, lifestyles, and interactions with the brand (Zarantonello & Schmitt, 2010).

## II. Method

This study will be based on an online survey with a self-administered questionnaire using panel data from a large research firm. A questionnaire will be developed to measure brand attributes (e.g., brand experience, brand knowledge, brand attachment, etc.) and outcome variables from related studies. In addition, cruise line amenities and general socio-demographic questions will be included at the end of the survey. The sample of this study will be those who recently went to an ocean cruise vacation. An expert's review and a pilot study will be accompanied to establish the reliability of the final version of the questionnaire. Cluster analysis will be used to identify groups of cruise travelers in terms of brand experience. A multiple discriminant analysis (MDA) will be conducted to examine the uniqueness of each cluster. In addition, regression analysis will be used to test proposed relationship.

## III. Expected Findings

This study anticipates that different types of cruise experiences create different cruiser segments. The findings of this study will add to the theoretical body of knowledge about segmenting cruise passengers based on their experiences associated with a cruise brand. Authors suggest that future studies relate to investigating cruisers' emotional benefits resulting from a cruise experience and developing brand equity strategies for each specific segment. The findings will also provide practical implications to the industry. First, cruise companies can be advised to identify the types of experience that their passengers expect to receive and prefer to join while cruising. Second, cruise marketers are advised to design ideal cruise itineraries depending on segments and deliver customized experiences, which in turn, enhance relationships with them and lead to repeat purchases. Moreover, an examination of cruisers' experience with a brand can help marketers design more effective positioning strategies.

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## A Study of Ratings Changes at the Margin of Investment and Speculative Grades\*

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### Abstract

High-profile bankruptcies in investment grade firms and/or CDOs being given high ratings just before they collapsed have led to concerns about the rating agencies' apparent lack of timeliness in rendering downgrade decisions. One possible cause of such delays is that rating agencies coddle their clients to retain business. We examine small ratings downgrades (upgrades) in firms at the margin of investment (speculative) grade compared to those in adjacent firms of the same grade. In contrast to the concerns expressed above, we find little evidence of transparent coddling behavior involving downgrades in marginal investment grade firms with fundamental risk factors such as operating performance, leverage and size. However, speculative grade firms appear to receive 'favorable' treatment with respect to operating performance and size. In addition, we find unexplained upgrades in these firms after controlling for primary ratings factors.

**Keywords:** bond rating, downgrade, upgrade, speculative/speculative grade, coddling

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# **Alternative Tourism Marketing Strategy for International Tourists: A Case Study of the Petrified Wood Museum**

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## **Abstract**

This study is aimed at exploring the Alternative Tourism Marketing Strategy for International Tourist: A Case Study of The Petrified Wood Museum in the Muang District of Nakhon Ratchasima Province. The purposes of this study are as follows: (1) to study the components of tourism at The Petrified Wood Museum, (2) to study visitors' motivation of alternative tourism marketing strategy (3) to examine The Petrified Wood Museum using SWOT Analysis, and (4) to provide an Alternative Tourism Marketing Strategy directed at International Tourists for The Petrified Wood Museum. The results showed the following: The goal of The Petrified Wood Museum is to reach international tourists. The main tourism marketing strategies implemented by The Petrified Wood Museum are as follows 1) to differentiate their products and prices, 2) sell an inclusive package tour by combining the tourism products, 3) expand their channels of distribution, 4) establish a marketing division for proactive marketing management, and 5) create and implement a proactive foreign language training course for their personnel.

**Keywords:** Alternative Tourism, Marketing Strategy, International Tourists, Petrified Wood Museum

## **I. Introduction**

Tourism is one of the most influential industries in most countries of the world. The World Tourism Organization has estimated the average annual growth rate for Asia-Pacific region and Thailand, the estimates are 7.7 percent and 7.8 percent, respectively. With its fast pace of growth, each and every country has to try and bring out their uniqueness to create added values for their tourism products and gain competitive advantage. Thailand is not an exception in this. The Thai tourism industry is at an advantage as the Royal Kingdom is graced with an abundance of fine attractions, natural destinations, architectural wonders, heritage sites and



established arts and cultures. Thai people are friendly and gentle. They know how to give tourists a warm welcome. Hospitality of Thai people and the fame of Thai food attract the tourists' attention. That is the reasons why tourism has generated huge revenue for Thailand each year. A tourist destination in any location can create jobs and income, as well as distribute earnings to relevant businesses as well. (TAT, 2014)

Khorat Fossil Museum is located at Muang Nakhon Ratchasima District, Nakhon Ratchasima. Queen Sirindhorn was the president of an opening ceremony. The museum is the very first fossil museum of Thailand. And, it is the one out of seven fossil museum in the world. The museum has been separated into three zones as follows: 1) Khorat Fossil Museum – contains fossils which are 800,000 – 330 million years old and diamond fossils. 2) Ancient Elephant Museum – exhibits fossils of ancient elephants in variety breeds. And 3) Dinosaur Museum – exhibits dinosaur body organs for both omnivore and carnivore dinosaurs. (Khorat Fossil Museum, 2014)

## II. Literature Review

### Tourism Impact Assessment

Tourism, W.A. (2008). says that the 5 A's of Tourism when considering your proposed tourism business idea you need to consider whether it addresses each of the 5 A's of tourism – attraction, access, accommodation, awareness and amenities. All of these add up to the creation of a successful tourism destination and a successful tourism business. Tourists are motivated to visit **attractions**. There are natural attractions such as waterfalls and beaches, built attractions such as the Sydney Opera House, and private business developments such as Adventure World and Dream World. Tourists wanting to visit attractions will need to get to them and require adequate **access**. This can take the form of transportation such as day or extended tours, aircraft and boats, or infrastructure such as roads, airports and harbors. If an overnight stay is required during the trip, tourists visiting an attraction will need **accommodation** at or near the attraction, or on the way to the attraction. Having the best attractions, access, accommodation and amenities in the world is totally useless if the **awareness** factor is missing. Tourists also require **amenities** at their accommodation and on the way to destinations and attractions. Tourism Impact Assessment (8 A's) (Buhalis, 2000; Tourism Western Australia, 2008) as follows: 1) Attraction 2) Accessibility 3) Amenity 4) Ancillary 5) Accommodation 6) Awareness 7) Available Packages and 8) Activities

### Alternative tourism

Krippendorff (1987, p.37) says that alternative tourism is not a well-defined notion, but the term is coming to be used increasingly for various modes of travel: educational trips, adventure holidays, hiking holidays or the solitary journeys undertaken by globe trotters, and so on. The guiding principle of alternative tourists is to put as much distance as possible between themselves and mass tourism. They try to avoid the beaten track, they want to go to places where nobody has set foot before them; they want to do things which will bring them a sense of adventure and help them to forget civilization for a while. Alternative tourists try to establish more contact with the local population, they try to do without the tourist infrastructure and they use the same accommodation and transport facilities as the natives. They also want to get more information before and during their holiday. They travel alone or in small group.

Butler (1990) also mentions that the flow of development is always unidirectional. Tourism can proceed from an alternative form into mass tourism, and many times there is pressure to do so, but it cannot retreat from mass tourism to an alternative form of tourism. Demand for alternative forms of tourism is on the increase. Whether this is due to the root causes when the consequences of market demand are considered. With increasing demand for alternative forms of tourism, tourism developments will be dedicated to providing alternative travel experiences. How they are planned and managed will be an important area of tourism development research in the future (Gartner, 1996).

### **Marketing Mix**

Kotler and Armstrong (2007) have defined marketing strategy as a marketing logic with which a business achieves their goals and generate profit on the basis of their relationship with the customers. This involves differentiation, value proposition and fulfilment of customer requirements. A marketing strategy can be successful with an appropriate marketing mix, meaning the availability and use of controllable marketing tools with an aim to satisfy the target consumers. This marketing mix is crucial to how strategies are established. A hugely popular marketing strategy is 4Ps which comprises product, price, place and promotion (Kotler et al., 1999). However, tourism requires service marketing which is considerably different from product marketing. Because it is a service, production and consumption take place at the same time. Kandampully (2002) suggests that traditional 4Ps marketing mix cannot sufficiently satisfy the requirements of the tourism market. Therefore, he has decided to expand it as 16 P's (Marketing Mix) (Baumgartner, 1991; David, 2013; Andrew, 2007; Kotler et al., 1999; Rogers, 2000) as follows: 1) Product Strategy 2) Positioning Strategy 3) Price Strategy 4) Promotion Strategy 5) Place Strategy 6) People Strategy 7) Physical Evidence Strategy 8) Public Relation Strategy 9) Process of Service Strategy 10) Period Strategy 11) Profit strategy 12) Planning Strategy 13) Procedure Strategy 14) Partnership Strategy 15) Participation Strategy and 16) Public Opinion Strategy.

### **DATA AND METHODOLOGY**

The tool used to collect data is a questionnaire to be completed by the tourists. This questionnaire contains two parts. The first part has questions about the demographics of the tourists such as gender, age, marital status, income and education. The second part has questions about the tourists' satisfaction on Tourism Impact Assessment (8 A's) and tourist's motivation on Tourism Marketing Strategy (16 P's). This questionnaire has been evaluated for content accuracy by Thailand's qualified tourism experts. It was originally prepared in Thai and translated into English by a linguist specialist with the Language Institute of Khon Kaen University to use with foreign tourists. Data Collection Procedure The target population was Thai and foreign tourists visiting Khorat Fossil Museum. The appropriate sample size was determined to be 396 Thai tourists and 4 foreign tourists, using the qualitative research method that was integrated with a quantitative method in order to obtain the complete data. To ensure that the objectives of the research were met, the researcher applied mixed methods. Methods used to collect data included an interview form, questionnaires, a focus group discussion, and a workshop. Data analysis was performed using descriptive analysis. For the statistical analysis of data, the Percentage, Mean, Standard Deviation, and Chi square were applied.

## RESULTS AND DISCUSSION

### 1. Tourists' Satisfaction of Tourism Impact Assessment (8 A's) on Tourism of Petrified Wood Museum

**Table 1:** Average and Standard Deviation of Tourism Impact Assessment (8 A's) on Tourism of Petrified Wood Museum

Satisfaction	Level of Satisfaction		
	$\bar{X}$	S.D.	Level of Satisfaction
1. Attraction	4.24	0.62	Very Satisfied
2. Accessibility	4.03	0.73	Satisfied
3. Amenity	3.52	0.74	Satisfied
4. Ancillary	4.01	0.6	Satisfied
5. Accommodation	4.00	0.63	Satisfied
6. Awareness	4.15	0.63	Satisfied
7. Available Packages	3.85	0.78	Satisfied
8. Activities	4.11	0.71	Satisfied
<b>Total</b>	<b>3.98</b>	<b>0.68</b>	<b>Satisfied</b>

According to Table 1, tourists are very satisfied attraction of tourism impact assessment (8 A's) on Tourism of Petrified Wood Museum which have a high average ( $\bar{X}$  = 4.24 and Standard Deviation (S.D.) = 0.62).

### 2. Tourist's Motivation on Alternative Tourism Marketing Strategy (16 P's) of Petrified Wood Museum

**Table 2:** Average and Standard Deviation of Tourist on Alternative Tourism Marketing Strategy (16 P's) of Petrified Wood Museum

Motivation	Level of Motivation		
	$\bar{X}$	S.D.	Level of Motivation
1. Product Strategy	3.54	0.72	Satisfied
2. Positioning Strategy	4.03	0.72	Satisfied
3. Price Strategy	3.49	0.76	Satisfied
4. Promotion Strategy	4.02	0.66	Satisfied
5. Place Strategy	4.07	0.75	Satisfied
6. People Strategy	4.06	0.67	Satisfied
7. Physical Evidence Strategy	4.10	0.66	Satisfied
8. Public Relation Strategy	3.53	0.76	Satisfied
9. Process of Service Strategy	4.19	0.65	Satisfied
10. Period Strategy	4.12	0.68	Satisfied
11. Profit strategy	3.76	0.65	Satisfied
12. Planning Strategy	4.14	0.66	Satisfied
13. Procedure Strategy	3.88	0.70	Satisfied
14. Partnership Strategy	4.13	0.65	Satisfied
15. Participation Strategy	4.07	0.66	Satisfied
16. Public Opinion Strategy	4.08	0.70	Satisfied
<b>Total</b>	<b>4.01</b>	<b>0.68</b>	<b>Satisfied</b>

According to Table 2, tourists' motivation on alternative tourism marketing strategy (16 P's) of Petrified Wood Museum were satisfied.

## III. Conclusion

This paper discusses about the goal of Petrified Wood Museum is to reach international tourists. The main tourism marketing strategies implemented by The Petrified Wood Museum are as follows 1) to differentiate their products and prices, 2) sell an inclusive package tour by combining the tourism products, 3) expand their channels of distribution, 4) establish a marketing division for proactive marketing management, and 5) create and implement a proactive foreign language training course for their personnel. The Petrified Wood Museum contains tourism components, such as attraction, accessibility, amenities, ancillary services, accommodations, awareness, available packages, and activities. Regarding tourism readiness, it is at a satisfactory level ( $\bar{X}$  = 3.98) and it is able to provide an alternative tourism marketing strategy for international tourists for the Petrified

Wood Museum. Regarding the tourism motivation of marketing strategy (16 P's), it is at a satisfactory level ( $\bar{x}=4.01$ ). For this reason, the developing methods of marketing strategy (16 P's) were suggested for its tourism readiness and for its further expansion. The relationship between visitors' motivation for The Petrified Wood Museum showed that demographic characteristics were statistically significant at the level of 0.05 as well.

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# Does Social Network Really Matter in FDIs?

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## I. Introduction

In recent decades, there has been a trend in the world economy to liberalize through deregulation. Thus, the global financial and product markets have become globalized and opened to other countries (Helleiner 1995), resulting in the integration of these markets. In other words, through the world market globalization, both the real economy (i.e., trade) and the financial economy (i.e., financial transactions) have become integrated (Vo and Daly 2007). Accordingly, cross-border mergers and acquisitions (M&As) have increased significantly, and many previous papers have documented the increase in cross-border acquisitions in terms of volume and frequency. Even though the global markets are integrated and cross-border acquisitions are prevalent in the global markets, variations still exist between the target nations and acquiring nations in terms of both country-specific factors (i.e., culture, religion, and language) and deal-specific components (i.e., payment methods) (Ahern, Daminelli et al. ; Morosini, Shane et al. 1998; Rossi and Volpin 2004; Chakrabarti, Gupta-Mukherjee et al. 2008; Aybar and Ficici 2009). Therefore, it is meaningful to investigate the determinants that may affect the stock market evaluation of cross-border merger decisions. Previous cross-border merger studies have mainly focused on the bilateral relationship between the target and acquiring nations, analyzing, for example, trade openness and cultural distance as major determinants of the volume and performance of those mergers. However, as the global markets have become increasingly integrated, trade openness needs to be measured more comprehensively and new dimensions of cultural distance need to be examined in order to analyze how those two factors interact to affect the performance of cross-border mergers. Stulz and Williamson (2003) argue that national culture explains variations in the shareholder protection of the local economy better than the trade openness of the country does. Therefore, in this study, using complex network analysis, we examine the impact of national trade connectivity on the performance of cross-border acquisitions of U.S. firms, and we examine the moderating effect of cultural distance.

Investigating the relationship between target and acquiring nations in international trade network contexts may provide valuable insight into understanding the determinants of cross-border acquisitions returns, because acquisitions with target nations that have stronger power through international connectivity in their trade

networks may allow managers of acquiring firms to make the post-merger integration process more efficient (Chakrabarti, Gupta-Mukherjee et al. 2008). In addition, acquisitions with target nations that are more open to world trade may provide acquiring companies an opportunity to expand globally. A few studies have introduced bilateral trade openness concepts between target and acquiring nations in cross-border mergers and acquisitions research by using export and import trade volume data, and they have empirically shown a positive and significant relationship between the cross-border performance of M&As and bilateral trade (Rossi and Volpin 2004; Chakrabarti, Gupta-Mukherjee et al. 2008). However, the bilateral trade openness concepts have a few limitations since they do not consider the complexity inherent in world trade. In other words, the trade openness measurement should be more than bilateral, because the world economy has become more integrated and more interconnected through globalization. (De Benedictis and Tajoli 2011) argue that world trade should be considered as a network and be analyzed using various network analysis measurements, such as centrality measurements, because they complement other trade openness measures, such as the gravity model (Anderson and van Wincoop, 2003; Harrign, 2003; Helpman et al., 2008). Likewise, adopting a network analysis can complement a simple bilateral relationship measure based on trade volume from target to acquiring nations. Therefore, instead of bilateral trade variables, we use eigenvector centrality, which is one of the most common methods of analysis in the social network field.

Ahern et al. (2015) argue that cultural values have a significant impact on financial outcomes in international transactions, such as foreign direct and equity investments, venture-capital flows, cost of borrowing, stock market participation, and stock price momentum. Therefore, the disparity in cultural values between acquiring and target nations must be critical for cross-border mergers, where the incompatible cultures of two entities should be fused for a successful post-merger integration. The cultural fit between acquirer and target companies is an important determinant of successful post-merger integration not only for mergers in an international context but also for those in a domestic environment. (Bauer and Matzler, 2014; Weber and Camerer, 2003; Weber, Shenkar, and Raveh, 1996) Therefore, in addition to trade networks, we also focus on the cultural distance between target and acquiring nations, because not only is cultural disparity important in international transactions, but it has also been the most commonly used variable in recent cross-border M&A studies. (Ahammad, Tarba et al. ; Chakrabarti, Gupta-Mukherjee et al. 2008; Reus and Lamont 2009; Erel, Liao et al. 2012) Furthermore, studies in cultural distance empirically show a significant but conflicting relationship with M&A performance: cultural factors may positively or negatively affect the M&A returns. Some research shows a positive relationship between cultural difference and post-performance returns since cultural disparity can provide a variety of routines and repertoires (Morosini, Shane et al. 1998; Chakrabarti, Gupta-Mukherjee et al. 2008). However, other studies show that cultural distance is negatively related to the short-term performance of cross-border M&As since cultural distance can be a cost of acquiring companies in the post integration process and can cause cultural clashes (Datta and Puia 1995; Stahl and Voigt 2008). Thus, in this study, we use Hofstede's cultural distance measure, which has been the most commonly used cultural distance measurement. Chakrabarti et al. (2009) show that Hofstede's cultural distance has a significant impact on the announcement returns of mergers and on post-merger long-term performance. In addition to the four dimensions of Hofstede's cultural disparity measurements used by Chakrabarti et al. (2009), we add two additional measurements: Pragmatic versus Normative (PRA) and Indulgence versus Restraint (IND), which have not been examined in previous cross-border merger studies.

It is important to examine the impact of interactions among openness and cultural disparity on the stock market evaluation of cross-border mergers. More specifically, Stulz and Williamson (2003) argue that countries can stand to benefit from bilateral trade and that it is important to consider not only cultural effect but impact from other countries in finance. Thus, this study examines the moderating effect of openness as measured by trade network with cultural distance.

In this study, we use a sample of 779 acquisitions from U.S. acquiring firms and 42 different target nations during the period 2001-2007. We measure announcement returns using the market model event study to evaluate the reaction from the market, and we use Bonacich's eigenvector centrality to measure the degree of trade network connectivity of the target nations compared to other countries using the world trade volume data from the World Bank. In addition, we use the cultural distance measure developed by Hofstede and include PRA and IND in that measure. Thus, we investigate the impact of centrality in the world trade network of target nations and cultural distance on the performance of M&As after controlling for firm-specific factors such as firm size, profitability, and financial leverage, country-specific factors such as GDP growth, language, and religion, and deal-specific effects such as hostile merger indicators. We find that acquisitions with target nations having more centrality in cross-border trade networks yield higher returns for acquiring companies. This result strongly supports our hypothesis and is consistently significant after adding the cultural distance variables and controlling for firm-specific variables and deal-specific variables. Moreover, our empirical evidence shows that cultural distance variables are negatively related to the performance of M&As. These results are consistent with previous studies in which the short-term performance of cross-border acquisitions is negatively related to cultural distance due to cultural clashes (Datta and Puia 1995).

We contribute to the literature with the introduction of network analysis in financial studies, which are more elaborate measurements of bilateral trade transactions. Further, we capture the trade relationship between target and acquiring nations in the contexts of complex world trade network rather than simple bilateral transactions. In addition, we confirm the negative effect of cultural distance on the short-term returns of cross-border acquisitions using Hofstede measurements. In cultural distance measurements, we use six-dimensional distance measurements rather than the four-dimensional measurements that had been widely adopted in previous studies.

The rest of the paper is organized as follows. The next section describes the previous research. Section 3 presents the sample selection and applied methodologies. This is followed by a discussion of the effect of trade network centrality and cultural distance on the post performance of cross-border acquisitions in Section 4. This paper concludes with the summarized results and several suggestions for future research in this area.

## **II. Literature Review and Hypothesis Development**

Since early 1990, international mergers and acquisitions (M&As) have begun to succeed along with the increase in economic globalization (Martynova and Renneboog 2008). Since domestic transactions had dominated the M&As market up until then, the globalization of M&As is one of the most striking features of the global economy, as reported in recent M&A studies. Unlike domestic deals, international deals provide an important means for multinational companies to achieve global market power. Some studies have examined the determinants of cross-border takeover gains in bidder and target firms. In addition to analyses of the various factors that affect the M&As performance, such as firm-specific or deal-specific factors, analyses of the cultural

distance between acquirer and target firms has come to the fore in recent literature (Ahern, Daminelli et al. ; Morosini, Shane et al. 1998; Rossi and Volpin 2004; Chakrabarti, Gupta-Mukherjee et al. 2008; Aybar and Ficici 2009).

Therefore, the national economic factors can be critical for cross-border acquisitions since cross-border acquisitions are an important way of gaining international market power. Therefore, recent studies have started to focus on the economic differences between acquirer nations and target nations and the openness of the target nation to international trade market (Rossi and Volpin 2004; Chakrabarti, Gupta-Mukherjee et al. 2008). (Rossi and Volpin 2004) show that bilateral trade between the two acquisition parties positively and significantly affects the propensity for cross-border deals. Although they find the reverse results for bilateral trade variables, (Chakrabarti, Gupta-Mukherjee et al. 2008) find that the openness of the target nation to international trade is also a crucial factor in cross-border acquisitions. Researchers in the field of international economics have long considered international trade as a network structure (De Benedictis and Tajoli 2011). However, the methodologies that they have adopted do not consider international trade as network and do not capture the complexity of the entire international trade network.

Rather than adopting previous methods, social network analysis could be used to examine the international trade network. Since centrality, one of the well-known methodologies in network analysis, can capture the positions of a node in the network structure, social network methodology has rapidly risen as tool for measuring complex relationships in broad areas in research such as marketing and economics (De Benedictis and Tajoli 2011; Yoganarasimhan 2012). (Yoganarasimhan 2012) examines the positions of the writers in a local network in terms of their connectivity, clustering, and centrality, which are well-adopted tools in social network analysis. (De Benedictis and Tajoli 2011) explore the world trade network using a centrality measurement. They argue that the utilization of centrality measurements is better because “representing a network of trade flows is to give emphasis to the relationship between the countries in the network and the structure, or the systemic feature, of the network itself.” (De Benedictis and Tajoli 2011).

*H<sub>1</sub>*: Acquisitions with target nations that have stronger connectivity of trade networks result in higher returns for acquiring companies.

Substantive research examining the determinants of success in cross-border mergers and acquisitions has been done in the past few decades; however, no deterministic conclusions have been reached in this area. Moreover, the focus of international studies has been on the cultural differences between the two parties in the M&As. Although many recent studies have already discussed the effects of cultural disparity on the cross-border M&As returns, there is some controversy or contention about this issue. (Morosini, Shane et al. 1998) posit that cultural distance has both positive and negative effects on cross-border acquisitions since cultural distance creates synergy between the target and acquiring firms but also disrupts the post-merger integration between acquirer and target firm. They empirically show that cultural distance positively affects the sales growth of acquiring firms since cultural distance provides a variety of patterns and methods in management and business operations of the firm. However, their study has limitations in that it uses percentage of sales growth as the dependent variable to show the performance of the acquiring company (Morosini, Shane et al. 1998). More



recent studies have shown that acquisitions of more culturally dispersed firms results in higher returns in the long-term (Chakrabarti, Gupta-Mukherjee et al. 2008).

On the other hand, some studies argue that cultural distance can negatively affect the shareholders' return of the acquiring firms since cultural distance can be a cost to the acquiring firms and cultural risk affects the post-acquisition process (Stahl and Voigt 2008). Further, (Datta and Puia 1995) findings reveal a negative effect of cultural fitness on shareholders in cross-border acquisitions undertaken by U.S. acquirers. Their study contributes to the previous literature since it focuses on the announcement effect rather than long-term performance.

*H<sub>2</sub>: Cultural distance negatively affects the returns of acquiring firms in cross-border acquisitions.*

In addition to the cultural difference factors measured by (Hofstede 1984), other cultural factors such as language and religion are viewed as important variables in international finance studies (Ahern, Daminelli et al. ; Stulz and Williamson 2003; Rossi and Volpin 2004; Chakrabarti, Gupta-Mukherjee et al. 2008). (Stulz and Williamson 2003) argue that language can be a tool for communication and can promote the transfer of ideas among employees; thus, language plays a role in international acquisitions. Likewise, religion can be a route for innovation and plays a key role in finance (Stulz and Williamson 2003). Other studies have empirically shown that when the two acquisition partners have the same language, the propensity for cross-border acquisitions is positively affected, whereas the propensity for domestic deals is unaffected. (Rossi and Volpin 2004). Therefore, language and religion can play a crucial role in cross-border mergers and acquisitions since these two factors affect values, resources allocation, and institutions in a country (Stulz and Williamson 2003).

*H<sub>3</sub>: Having the same language and religion is positively related with takeover returns in cross-border acquisitions.*

### III. Data and Methodology

Our empirical analysis of cross-border acquisitions is based on a sample of M&As that occurred during the seven-year period from 2001 to 2007. The acquisitions data was obtained from the SDC Platinum Mergers & Acquisitions database. First, we obtained 8,767 observations from U.S. acquirers, excluding targets or acquirers from the financial industry. From that, we selected events that meet the following criteria: 1) the acquirer is publicly traded; 2) the deal has been completed; 3) the target or acquirer is not from the utility industry, SIC codes 4900-4999; 4) the acquirer owns 100% of the shares of the target firm after the transaction; 5) the U.S. is not the target nation; and 6) the target nations have trade volume data. In the end, we narrowed our selection to 779 samples with the U.S. as the acquirer nation and 42 different target nations. Table 1 shows the number of transactions for each target nation from 2001 to 2007. The majority of acquisitions with the United States as the acquirer were made by the top two target nations, the United Kingdom and Canada.

We mainly use the event study methodology to observe the stock price reaction to the announcement of acquisitions. This approach is widely used in business research when analyzing the announcement returns of certain events, such as mergers and acquisitions, stock repurchases, and stock splits. Under the market model,

we get the cumulative abnormal returns (CARs) of acquirer firms. Abnormal returns (AR) are computed by subtracting the market index return for day  $t$  from the rate of return of  $j$  company at time  $t$ . As a result, the abnormal return of company  $i$  at time  $t$  is given by

$$AR_{i,t} = R_{i,t} - R_{m,t} \quad (1)$$

Cumulative abnormal returns (CARs) for the window  $(t_1, t_2)$  are given by

$$CARs_i(t_1, t_2) = \sum_{T=t_1}^{t_2} AR_{i,t} \quad (2)$$

We construct five windows,  $(-5, +5)$ ,  $(-3, +3)$ ,  $(-1, +1)$ ,  $(-1, 0)$ , and  $(0, +1)$  for cumulative abnormal returns (CARs) where  $t=0$  is the announcement date. We mainly use the CARs  $(-1, 0)$  as the dependent variable for the multivariate regression models in this study.

Deal-specific characteristics are likely to affect the performance of acquiring firms. Therefore, deal-specific variables are added in our regression models as independent dummy variables. From the SDC Platinum database, we also obtain deal-specific variables regarding the deal type. With this information, we construct the dummy variable as friendly, hostile, or neutral. In our regression models, hostile equals one if the transaction is a hostile deal.

In addition to that, firm-level variables also have an impact on the acquisition returns and should be controlled to illuminate the impact of other major variables, such as network centrality and cultural factors. Therefore, we use three variables to control the firm-specific characteristics such as firm size, financial leverage, and profitability. The required data was obtained from the COMPUSTAT database.  $\ln(\text{Total asset})$  is the natural logarithm of total assets as a proxy for firm size. Leverage is the debt ratio calculated as total debt divided by total assets as a proxy for financial leverage. ROA is the return on assets (ROA) calculated as net income divided by total assets.

In recent studies, cultural factors have been viewed as important in determining the success of cross-border mergers and acquisitions. Therefore, we examine the cultural factors using several variables. First, we use the cultural distance measure developed by Hofstede (1980, 2001, 2010). We observe cultural disparity using the following six-dimensional factors: the power distance index (PDI), individualism versus collectivism (IDV), masculinity versus femininity (MAS), uncertainty avoidance (UAI), pragmatic versus normative (PRA), and indulgence versus restraint (IND). Each variable is calculated as the absolute difference between the target and acquiring nations. To capture the impact of each variable, we run the regression with the six variables separately. Also, we investigate the overall influence of cultural disparity using formula (3) (Morosini, Shane et al. 1998). In our regression model, we use  $\ln(\text{Aggregate Cultural distance})$ , the natural logarithm of aggregate cultural distance, to examine the combined influence of the six-dimensional factors of Hofstede's cultural distance.

$$\text{Aggregate CD (T, U)} = \sqrt{\sum_{i=1}^6 (H_{i,t} - H_{i,u})^2} \quad (3)$$

We also investigate the impact of language and religion on the acquisitions gains. We construct a dummy language variable, which is given a score of one if the target and acquiring nations share the same first language and zero otherwise. Further, we construct a dummy religion variable, which is given a score of one if the target

and acquiring nations share the same primary religion and zero otherwise. All the data required is obtained from the CIA World Fact Book.

In recent international M&A studies, the trade relationship between the two acquisition parties measured by bilateral trade has emerged as an important factor for the performance of the M&As (Rossi and Volpin 2004; Chakrabarti, Gupta-Mukherjee et al. 2008). Following this trend, we also observe the international trade network. Besides countries' own properties, network analysis investigates the relationship between countries and emphasizes the power of flow in the bilateral trade (De Benedictis and Tajoli 2011). (De Benedictis and Tajoli 2011) argue that the bilateral trade should be investigated as network and gives more priority on the interconnectedness between the countries rather than to the countries' attributes. Therefore, they analyze world trade network using network analysis measures, such as degree, closeness, and betweenness centralities.

In previous , degree, closeness, and betweenness centralities are widely-used in network analysis (De Benedictis and Tajoli 2011; Yoganarasimhan 2012). Centrality measurements used in the existing literature also have limitations that they are only useful in rigorously binary connections between nodes (Bonacich 2007). Different from those measurements, eigenvector centrality gives weights differently depending on the the entralities of the variables (Bonacich 1972). Eigenvectors and Bonacich's  $\mathbf{c}(\boldsymbol{\beta})$  provide advanced measures of power in complex networks (Bonacich 2007). Therefore, we use eigenvectors and Bonacich's  $\mathbf{c}(\boldsymbol{\beta})$  to investigate the world trade network.

The centrality power of the target nation in the bilateral trade network can affect the acquisitions' returns. We therefore measure the centrality of target nations with eigenvectors and Bonacich's  $\mathbf{c}(\boldsymbol{\beta})$ . In this study, we use only the annual bilateral export' volume data of 42 nations measured in US dollars from World Bank database. Although target nations are only 42 nations in this study, we collect all the data provided to capture the target nation's centrality in entire world trade network. According to (Bonacich 2007), eigenvector centrality, 'x' can be shown as two ways. One is defined as matrix form and the other is calculated as sum of path. In matrix form,  $\lambda$  is defined as the largest eigenvalue of A and 'n' is defined as the number of nodes or the number of nations in this research. And in the right equation,  $\mathbf{a}_{ij}$  equals 1 if node  $i$  is connected to the node  $j$ , and 0 otherwise.

$$\mathbf{Ax} = \lambda\mathbf{x}, \quad \lambda x_i = \sum_{j=1}^n \mathbf{a}_{ij} \cdot x_j, \quad i = 1, \dots, n \quad (4)$$

Following formula (4), we get the value of centralities for each year. In the regression model, the eigenvector centrality of the target nation is represented as "Centrality" and used as a major determinant to explain the takeover returns. Table 3 shows target nations' eigenvector centralities in the world trade network, ranked in descending and ascending order for each year. In Table 3, the order fluctuates from year to year.

We also include other economic variables, such as gross domestic product (GDP) and the growth rate of gross domestic product (GDP Growth). These variables are obtained from the World Bank database, and we use the natural logarithm of GDP for this study, LN(GDP).

#### IV. Empirical Results

In this study, we use the CARs to measure the short-term performance of acquiring firms. Since we focus on the announcement effect, we collect five windows of data for this event study on the basis of the

announcement date. The five windows are CARs (-1, 0), CARs (0, +1), CARs (-1, +1), CARs (-3, +3), and CARs (-5, +5). Among them, we mainly use the one-day window from the day before the event and the event day, CARs (-1, 0). Since there can be information linkage in equity market, we can observe the abnormal returns of acquiring firms with the observation period from one day before the event day to the event day (Chen and Young 2010). Table 4 shows the descriptive statistics of CARs (-1,0) of the acquiring firms. Although studies focusing on the long-term performance of acquiring firms show negative returns (Chakrabarti, Gupta-Mukherjee et al. 2008), we observe positive abnormal returns.

In this study, we use multiple linear regression models to test the impact of the cross-national trade network and cultural distance on the performance of acquirers. Since we capture the heteroskedasticity in our models, we perform ordinary least squares (OLS) regression with (MacKinnon and White 1985)'s heteroskedasticity consistent standard errors for both Table 5 and Table 6. In Table 4, we show the results of our regression models using independent variables and control variables. The dependent variable is CARs obtained from event study methodologies explained in the above section. The main independent variables in this study are trade network centrality and several cultural factors. Further, we use several variables to control the firm-specific characteristics. The control variables are firm size (Natural logarithm of total asset), financial leverage (Debt ratio), and profitability (ROA).

[Table 4]

We investigate eleven models in Table 5. The dependent variable in these models is CARs (-1, 0). The first model contains only the centrality measurement as an explanatory variable and does not include control variables. Although we do not control any firm-specific variables, the first model shows that trade network is positive and statistically significant at a one percent level. This result does not change even after controlling the firm-specific variables. In Table 5, model (3), we include Hofstede's six-dimensional cultural measurements. In this model, only one cultural distance factor, MAS, shows significant results, and centrality is significant at a five percent level. The trade network centrality shows consistent results in the three models that include the cultural factors and firm-specific characteristics considered. This result indicates that acquisitions with target nations having stronger power in trade networks results in higher returns in the short-term period.

Since various cultural distance factors might be related to each other, we run the regression separately with six different cultural dimensions in models (4) to (9) in Table 5. Among the six different cultural distance measures, only one variable shows statistical significance. The coefficient of MAS (Masculinity versus Femininity) is negative and significant at a five percent level. Throughout the six models from (4) to (9), the Hofstede measurements are consistently negative to the acquiring firm's performance. Although other cultural distance variables do not show significant results, the results are consistent with previous studies supporting that cultural distance can be a cost for an acquiring company and can negatively affect the returns of acquiring firms in the short term (Ahern, Daminelli et al. ; Chakrabarti, Gupta-Mukherjee et al. 2008).

[Table 5]

(Stulz and Williamson 2003) argue that language and religion should not be ignored when exploring the cross-national studies in finance, since they can affect the distribution of resources in an economy, are systems of organization, and represent the inherent values of the society. Therefore, language and religion should be

examined when undertaking the cross-border studies. We include language and religion dummy variables in models (10) and (11) respectively. The language dummy variable does not show significant results in model (10). However, the religion dummy variable is positive and significant at a ten percent level. This result indicates that acquisitions with target nations in which the majority of people follow the same religion as those in the acquiring nation perform better in the short run. In this study, acquisitions of firms in target nations whose primary religion is Christianity result in higher returns as the primary religion of the acquiring nation, the U.S., is Christianity. These results are consistent with previous research (Rossi and Volpin 2004, Chakrabarti, Gupta-Mukherjee et al. 2008).

We analyze the effect of trade network, economic factors, deal-specific variables, and cultural factors with ten models. Because of heteroskedasticity, we use the same regression model shown in Table 5. In Table 6, we also mainly use CAR (-1, 0) to capture the meaningful factors affecting the return of acquisitions. In model (1), we run the regression with only the centrality variable and control variables. This shows that centrality significantly affects the acquisitions' returns at a five percent significance level. From models (2) to (8), we add the hostile dummy variable and the religion dummy variable. The hostile variable is negative and significant at a five percent level, which means that a hostile takeover negatively affects the returns after acquisitions. Therefore, takeovers that are accomplished without agreement from the target company do not positively affect the post-acquisition performance. The religion dummy variable is positive and significant at a ten percent level in models (2) and (3), which means that the abnormal returns of the acquirers are positively affected following acquisitions in which the target and acquiring nations share the same primary religion. The LN(GDP) variable is positive and significant throughout the eight models, from models (4) to (11), which means that acquisitions with target nations having larger GDPs or greater economic power gives positive effect to the acquisitions performance. Moreover, the LN(Aggregate Cultural distance) variable is negative and significant in four models from (6) to (11), except for model (8), and these results are consistent with the previous studies (Ahern, Daminelli et al. ; Chakrabarti, Gupta-Mukherjee et al. 2008).

## V. Conclusion

Previous studies argue that cultural distance can negatively affect the acquiring firms since cultural distance is a cost for acquirers to integrate with the target companies. Therefore, we hypothesize that cultural distance can affect negatively the post-acquisition returns of acquiring companies. To test this hypothesis, we use multiple-regression models and event study methodology with cultural distance variables developed by Hofstede. In addition to that, economic variables that measure the openness of the target nation using trade volume data and the gross domestic product (GDP) of the target nation have been focused on previously. Instead of using the openness measurement suggested in the extant literature, we apply the network analysis methodology using trade volume data. We anticipated that cross-national relationships measured by the network measurement eigenvector-centrality could better explain cross-border acquisitions. Therefore, we add a centrality variable as the main explanatory variable in this study. We confirm that acquisitions with target nations that are more open to the international trade network show positive and higher returns for the acquiring firms.

We contribute to the cross-border merger and acquisitions literature by extending the examination of the role of cross-national trade network. We focus on the cross-relationships between the acquiring and target

nations whereas previous studies have only focused on the openness of acquiring firms to the international trade market. Further, we confirm that cultural distance negatively affects the short-term returns of acquiring firms.

However, further study is needed to explore the determinants of cross-border mergers and acquisitions by adopting other network methodologies. Moreover, we examined the export volume data only. Thus, analyzing trade networks using both export and import data is needed in future research.

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**Table 4 Univariate Analysis**

	<i>Number of sample</i>	<i>Mean</i>	<i>Median</i>	<i>t-Test</i>	<i>Wilcoxon Test</i>
Total	N = <b>735</b>	0.0022 (0.1759)			
Same Language	N = 372	0.0015 (0.4697)	0.638 (0.5237)	0.0013 (0.6940)	-0.398 (0.6906)
Different Language	N = 363	0.0024 (0.2415)	0.039 (0.9685)		
Same Religion	N = 288	0.0037 (0.1546)	1.283 (0.1996)	-0.0025 (0.4434)	-1.133 (0.2571)
Different Religion	N = 447	0.0012 (0.5614)	-0.352 (0.7251)		
LN(Aggregate Cultural distance) above median	N = 162	0.0014 (0.6870)	-0.574 (0.5662)	0.0010 (0.8024)	0.893 (0.3719)
LN(Aggregate Cultural distance) below median	N = 573	0.0024 (0.1862)	0.823 (0.4107)		
Centrality above median	N = 620	0.0032* (0.0694)	1.218 (0.2232)	-0.0065 (0.1357)	-2.062** (0.0391)
Centrality below median	N = 115	-0.0034 (0.3793)	-1.719* (0.0856)		

Table 5 Regressions for announcement period abnormal returns associated with acquiring companies which announce cross-border acquisitions during 2001-2007

INDEP:	DEP: CAR(-1, 0)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Centrality	0.0452*** (2.66)	0.0457*** (2.69)	0.0449*** (2.65)	0.0457*** (2.69)	0.0449*** (2.65)	0.0456*** (2.74)	0.0350** (2.29)
Hostile	-0.0214 (-1.64)	-0.0210 (-1.59)		-0.0211 (-1.52)			
GDP Growth	-0.0000 (-0.01)	0.0002 (0.29)	0.0002 (0.29)	0.0002 (0.22)	0.0002 (0.22)		
LN(Aggregate Cultural Distance)	0.0078* (1.66)	0.0049* (1.94)	0.0050** (1.99)	0.0043* (1.80)	0.0045* (1.85)	0.0040* (1.68)	
Language	0.0049 (0.71)						
Religion	0.0030 (0.85)	0.0031 (0.91)	0.0032 (0.91)				
LN(Total Asset)	-0.0024** (-2.43)	-0.0023** (-2.42)	-0.0024** (-2.49)	-0.0023** (-2.42)	-0.0024** (-2.50)	-0.0024** (-2.49)	-0.0024** (-2.48)
Total debt/Total asset	0.0242*** (2.71)	0.0239*** (2.68)	0.0238*** (2.68)	0.0239*** (2.69)	0.0239*** (2.69)	0.0213*** (2.43)	0.0214** (2.44)
Net Income/Total Asset	0.0263 (1.50)	0.0262 (1.49)	0.0262 (1.49)	0.0262 (1.49)	0.0262 (1.50)	0.0281 (1.61)	0.0284 (1.62)
Intercept	-0.0380 (-1.60)	-0.0236 (-1.61)	-0.0236 (-1.61)	-0.0197 (-1.42)	-0.0197 (-1.42)	-0.0166 (-1.20)	0.0028 (0.36)
F-Value	2.29	2.49	2.51	2.81	2.93	3.36	3.68
R-squared	0.0317	0.0310	0.0297	0.0298	0.0285	0.0267	0.0229
No. of obs	721	721	721	721	721	731	731



# **The Effects of Extra Credit Assignments in Management Information Systems Classes: Do Extra Credit Assignments Lead Students to Moral Hazard?**

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## **Abstract**

One of the challenges in teaching MIS (Management Information Systems) courses is which group of students we should focus on. For example, if the class content is developed mainly for the upper 50% students (in terms of their academic readiness), then the class content would tend to be too difficult for the lower 50% students to absorb, hence, many students would be left behind. Conversely, if the class content is designed mainly for the lower 50% students, the class content would be too easy for the upper 50% students, hence, the top tier students might lose their motivation to study more advanced topics in MIS.

In order to increase the top tier students' interest in MIS courses while minimizing unnecessary pressure to the lower 50% students, the author designed and has offered extra credit assignments for last 5 years. Examples of extra credit assignments include to receive Google Analytics certification (up to two grades up of the course mark), to write essays about students' reflection about movies that have implications about information technology, such as The Social Network, Money Ball, July and Julia (up to 1% of the course per essay).

It is expected that extra credit assignments would have many benefits. For example, extra credit assignments would make students have more interest in the course, spend more time for the course, learn more, and be satisfied with the course. While many benefits are expected, literature also suggests potential negative effects. For example, Wilson (2002) made a claim that extra credit assignments would induce moral hazard. In addition, it is possible that students who have not done any extra credit assignments might have negative perceptions about extra credit assignments. In this paper, we investigate the positive and negative effects of by conducting a survey and by examining students' actual performance in information technology related courses last 5 years.

**Keywords:** Extra Credit Assignments, learning, MIS

# **The Role of Humour in Workplace Relationships: Negotiating Confucius Boundaries in South Korean Organization**

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## **Abstract**

Humour is a universal phenomenon that is experienced by people of all cultures and organizations. Humour is becoming an increasingly prevalent topic in organizational studies, and a number of research studies demonstrate that humour can impact both horizontal and vertical relationships within the workplace. However, most literature is based on the Western context, which limits the understanding of humour within the globalized business environment. This conceptual paper seeks to illustrate the role of humour in South Korean (hereinafter Korea) organizations, where humour is analysed as a social process which affects the quality of interpersonal relationships in the workplace. Extending Cooper's relational process model into the Korean organizational context, I propose that humour helps to blur hierarchical boundaries created from the Confucian philosophy, which are embedded in Korean organizations (and within the wider society). During this process, the face of the communicators can be maintained by using the communication skill of *nunchi*, for interpersonal harmony. Thus, humour assists individuals from different (organizational) hierarchical status to smooth relational differences and develop relationships further. This interpersonal process is rather complex as it is in conflict with the Confucian value of hierarchical positioning and interdependent relationships, where patriarchy and associated inequality is accepted as a norm to achieve harmony. Status differences (through hierarchy) are accommodated by the Korean language such as the use of honorifics; hence communication is strictly structured to illustrate the positioning of the self and the communicating other. From the traditional Korean perspective, humour is an unfamiliar practice within organizations, as formality is emphasized and speech is devalued. However, like any other cultural context, this does not exempt humour from the organizational communication in Korea. Stressing the importance of *nunchi* in order to exchange humour safely, and as a result maintain the face of the communicators, humour assists to develop relationships beyond that of Confucian relationships. On the other hand, the role of humour can extend to damage workplace relationships and reinforce hierarchical boundaries under Confucianism, when mockery and ridicule is employed for the purpose of group division and control.

**Keywords:** Organizational behaviour, humour, Cooper, workplace relationships, Korean Confucianism

## Effects of corporate social responsibility and internal marketing on employees' work attitudes

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### Abstract

The purpose of this paper is to investigate how hospitality employees' perceptions of corporate social responsibility (CSR) and internal marketing (IM) relate to their work attitudes, examined through the lens of social identity theory. In particular, this study examined the effects of four aspects of CSR (i.e., economic, legal, ethical, and philanthropic responsibility) and five aspects of IM (i.e., welfare system, training, compensation, communication, and management support) on hospitality employees' organizational commitment (OC) and turnover intentions (TI). Based on survey data collected from 310 employees at a hospitality organization, the relationships were examined using confirmatory factor analysis, second-order factor analysis, and structural equation modeling. The results of this study indicate that both employees' perceptions of CSR and IM are positively related to their OC and negatively to their TI. Interestingly, the effect of CSR was found to be stronger than that of IM. This finding suggests that adding CSR programs to existing IM programs is likely to improve desirable employee work attitudes such as organizational commitment, which in turn contributes to decrease their turnover intentions. The structural analysis of this study showed that OC fully mediated the relationship of CSR to TI as well as that of IM to TI. That is, the effects of CSR and IM on TI operated indirectly via OC, suggesting that organizational commitment can strengthen the links between CSR and turnover intentions as well as IM and turnover intentions. This study makes contribution to the literature by conceptually and empirically evaluating CSR and IM dimensions simultaneously in the hospitality environment. Hospitality companies can benefit from the insights of this study's findings into how CSR programs can increase the commitment and retention of their employees.

**Keywords:** corporate social responsibility, internal marketing, hospitality employee, organizational commitment, turnover intentions.

## I. Introduction

Corporate Social Responsibility (CSR) programs have spread throughout the hospitality industry. Although there are different definitions and dimensions of CSR in current use, Carroll's (1991; 1998) definition with four CSR dimensions has been commonly adapted: a company should (1) make goods or services for consumers to yield a satisfactory profit in the process (economic responsibility), (2) comply with laws and regulations stated by governments in its operations (legal), (3) meet expectations of stakeholders and protect them despite these activities are not codified into law (ethical), and (4) meet shareholders' expectations on the company's engagement to enhance human welfare or good will (philanthropic). For example, Las Vegas hotels such as the Palazzo, Aria Hotel, Mandarin Oriental, and Vdara Condo Hotel were constructed following the Leadership in Energy and Environmental Design (LEED) guidelines. LEED is an independent, non-profit, third-party rating system established by the U.S. Green Building Council (USGBC). LEED-certification provides benefits for the environment (ethical responsibility) and attracts a growing population of environmentally conscious customers (Johnston & Breech, 2010).

In spite of the increasing number of hospitality companies implementing CSR programs, the majority of CSR studies have focused on customers (external stakeholders), and less attention has been paid to employees (internal stakeholders). Especially, the turnover rate in the hospitality industry is expected to increase as the economy begins to recover (Deloitte, 2012), and previous studies support that employees with high turnover intentions are likely to have low organizational commitment (Meyer, Allen, & Smith, 1993; Tett & Meyer, 1993). Thus, to decrease turnover rate, it is vital to understand the impact of employee perceptions of CSR on employee commitment levels. Moreover, none of CSR studies in the hospitality context has empirically examined the effects of both CSR programs and internal marketing (IM) on employees' work attitudes. Furthermore, previous studies have been inconsistent about the relationship between CSR and organizational performance, finding both significant and insignificant relations (Griffin & Mahon, 1997; Heinze, Sibary, & Sikula, 1999).

Therefore, the purpose of this paper is to explore whether CSR and IM influence employees' work attitudes, by investigating through the lens of social identity theory and Carroll's social performance model. In particular, this paper examined (1) whether CSR is comprised of four dimensions (i.e., economic, legal, ethical, and philanthropic) and IM is comprised of five dimensions (i.e., welfare system, training, compensation, communication, and management support) and then (2) whether these two high-order factors influence employees' organizational commitment and turnover intentions in the hospitality context. This study makes contribution to the literature by conceptually and empirically evaluating four CSR dimensions and five traditional IM dimensions simultaneously in the hospitality environment. It also provides a theoretical perspective through social identity theory for explaining why CSR programs impact hospitality employees' work attitudes and turnover intentions. Hospitality companies can benefit from the insights of this study's findings into how CSR activities can increase the commitment and retention of their employees. This study offers new avenue to explore in the emerging field of CSR scholarship. While other hospitality studies have tested the impact of CSR activities on their customer and employee attitudes, little research has investigated both impact of CSR and traditional IM on these specific employees' work attitudes (i.e., commitment levels and intentions to quit) in hospitality settings.

## II. Main Body

### Literature Review

An important conceptual model adapted in this study is Carroll's social performance model (1991, 1998). He noted that CSR could be divided into four dimensions: economic, legal, ethical, and philanthropic CSR. Economic CSR refers to actions that make goods and services and creative lucrative outcomes throughout the process. The economic CSR should be achieved within legal boundaries that the society outlines. Therefore, obeying laws and regulations is considered as legal CSR, the second dimension. Ethical CSR, the third dimension, is beyond the scope of codified regulations and laws, and it is defined as a company's endeavors to fulfill expectations of the society and to be a moral company. Philanthropic CSR, the fourth dimension, is regarded as a company's voluntary activities such as endowing money to charitable organizations, promoting support programs for a low-income group, and having their employees involved in humanitarian programs (Carroll, 1991; 1998).

The underpinning theory of this study is social identity theory (SIT) which suggests that individuals reinforce their self-esteem and augment their self-image by identifying with groups and organizations known for their social responsibility (Ashforth & Mael, 1989; Pratt, 1998; Tajfel & Turner, 1985). This identification theory can explain why a company's CSR programs can influence both customer and employee attitudes towards the company (e.g., Bhattacharya and Sen, 2004; Maignan & Ferrell, 2001; Maignan et al., 1999). For example, hospitality employees are likely to identify with a company which implements CSR initiatives especially if their values are aligned with these initiatives. CSR initiatives unveil the company's character which is "not only fundamental and relatively enduring but also more distinctive" (Sen & Bhattacharya, 2001, p. 228) than other types of corporate initiatives. In addition, socially-responsible companies are more likely to have positive public reputations (Fombrun & Shanley, 1990) which can make employees feel proud of working for these companies. Consequently, CSR initiatives can play important roles in gaining competitive advantages and supporting employee recruitment and retention (Park, Lee, & Kim, 2014).

Previous studies have empirically tested and supported the positive influence of CSR programs on employees' organizational commitment (Maignan, Ferrell, & Hult, 1999; Maignan & Ferrell, 2003; Peterson, 2004). According to O'Reilly (1989), organizational commitment is "an individual's psychological bond to an organization, including a sense of job involvement, loyalty, and belief in the value or the organization" (p. 17), and it involves three phases: compliance, identification, and internalization. In the first phase, employees will accept the influence of others in the company for extrinsic rewards such as compensations. In the second phase, employees will accept the others' influence to keep a self-defining relationship with the company. In the final phase, employees will find the company's values are aligned with their personal values, which can be intrinsically rewarding to the employees.

Another important concept of this study is internal marketing which is useful to develop organization's competitiveness and improve competences through more motivated employees (Rafiq & Ahmed, 2000). Abzari, Ghorbani, and Madani (2011) stated that internal marketing has been identified as an effective strategy to equip organizations with capabilities and competencies while enjoying environmental opportunities. Other researchers explained that the main aim of internal marketing is fulfilling employees' needs or wants to retain employees and

encourage them to deliver superior service to customers (Berry, 1981; Kotler & Armstrong, 1991). Cooper and Cronin (2000) claimed that internal marketing should be considered as the organization's active efforts for education, reward, and generally management of human resources for better service offering. Thus, hospitality companies should treat the concept of internal marketing seriously because employees will be more likely deliver superior service to customers when hospitality companies provide them with appropriate internal marketing programs such as welfare system, training, compensation, communication, and management supports.

### **Hypotheses**

George (2009) asserted that internal marketing programs are important antecedents of business performance indicators (e.g., service quality, turnover rate, customer conscious employees, and organizational commitment). Tansuhaj, Randall, and McCullough (1991) claimed that thriving internal marketing programs are closely related to enhanced employee attitudes including organizational commitment, job involvement, work motivation, and job satisfaction. Among these employee attitudes, organizational commitment refers to an individual's psychological affection to an organization that makes employees feel more attached to the organization (Leong, Furham, & Cooper, 1996). Such psychological connection is especially important in maintaining a good relationship between employees and the company (Meyer & Allen, 1997). In this regard, implementing internal marketing programs can be an effective strategy to increase employees' organizational commitment even in the situation when traditional internal communication programs are not available (Hogg, 1996). Ajay and Sabir (2009) also stated that employees in an organization offering high-quality internal marketing service are likely to have a higher level of organizational commitment. In the same vein, this study expects positive effects of internal marketing programs on organizational commitment in the hospitality industry. In addition, the current study expects that the overall quality of internal marketing programs is comprised of five related but distinctive dimensions (i.e., quality of welfare system, training, compensation, communication, and management supports) based on previous studies (e.g., Clampitt & Downs, 1993; Conduit & Mavondo, 2001; Jaworski & Kohli, 1993; Lux, Jex, & Hansen, 1996).

**Hypothesis 1:** Hospitality employees' perception of internal marketing is comprised of five related but distinctive dimensions (i.e., welfare system, training, compensation, communication, and management supports)

**Hypothesis 2:** Hospitality employees' perception of internal marketing is positively associated with their organizational commitment.

Initiating CSR programs has been considered not only social requirements but also employees' wants or needs for their company to be regarded as a more desirable organization (Lee et al., 2013). This phenomenon can be explained based on the perspective of social identity theory that people are likely to reinforce their self-concept and attitude toward an organization depending on the organization' activity and identity (Peterson, 2004). Smidts, Pruyn, and van Riel (2001) asserted that employees who think that they are in a socially responsible company compared to others are likely to enhance their self-esteem, which in turn positively affect their attitudes toward the company. It is plausible that CSR is positively related to organization commitment because organizational commitment can be reinforced when a company satisfies employees' needs and wants through its socially responsible activities (Vakola & Nikolaou, 2005). Brammer, Millington, and Rayton (2007) and Turker (2009) also supported the significant relationship between employees' perceptions of CSR and organizational commitment. Especially, the hospitality

industry is known as a labor intensive service industry with low wages and long or inconsistent working hours (Deery & Shaw, 1999; Worcester, 1999). For example, according to Moody's Analytics, the average annual pay for all workers in the traveler accommodations industry was \$32,347 in 2013 which is 38% lower than the average of \$52,539 for all other industries (Langfield, 2014). Considering this notorious characteristic, Bowen (1953)'s assertion that CSR performs an important role in making a company be more desirable should be intriguing information for hospitality operators. Similarly, previous study indicates that casino employees' organizational trust can be enhanced through casino companies' CSR activities (Lee et al., 2013). Based on the previous studies, this study hypothesized that hospitality employees' perception of CSR is positively associated with their organizational commitment, and CSR is comprised of four related but distinctive dimensions (economic, legal, ethical, and philanthropic CSR) (Carroll, 1979).

**Hypothesis 3:** Hospitality employees' perception of CSR is comprised of four dimensions (i.e., economic, legal, ethical, and philanthropic responsibilities).

**Hypothesis 4:** Hospitality employees' perception of CSR is positively associated with organizational commitment.

Tansuhaj et al. (1991) stated that internal marketing programs can contribute to organizational commitment which, in turn, significantly affects their job satisfaction, job performance, and turnover intention. In particular, the concept of turnover intention has drawn an academic attention as an important subject due to its negative results, such as costs to hire and train new employees and negative impact on customer service (Cotton & Tuttle, 1986). According to previous research, turnover intention is a significant consequence of organizational commitment (Mathieu & Zajac, 1990; Tett & Meyer, 1993). O'Reilly et al. (1991) claimed that when employees feel the high-level of organizational commitment, their turnover intentions are likely to decrease. Lane (1993) also supported this view by stating that organizational commitment is negatively associated with employees' turnover intentions while it is positively related to their job satisfaction levels. Given the high turnover rate in the hospitality industry, it is critical to empirically test potential antecedents of turnover intentions such as organizational commitment in diverse settings, which leads to the following hypothesis.

**Hypothesis 5:** Hospitality employees' organizational commitment is negatively associated with their turnover intentions.

### III. Method

A preliminary list of measurement items was generated after a review of the literature related to CSR (Carroll, 1979; Lee et al., 2012), internal marketing (Clampitt & Downs, 1993; Conduit & Mavondo, 2001; Foreman & Money, 1995; Jaworski and Kohli, 1993; Lux et al., 1996; Meyer et al., 1993), organizational commitment (Blau & Boal, 1987; Jaworski & Kohli, 1993), and turnover intentions (Dalton & Todor, 1993; Newman, Thanacoody, & Hui, 2011). All items were measured using a five-point Likert scale (1=strongly disagree and 5=strongly agree). Three tourism academics and two practitioners with more than 7 years of career evaluated the list of items whether these measurement items were proper for assessing hospitality company's CSR programs, internal marketing programs, and employees' attitudes toward the company. A pretest was also performed with 25 hospitality employees to further check the face validity of the survey. An on-site survey was conducted during October 2012 with hospitality employees who were working for a hospitality company in South Korea. The employees had options to complete questionnaires after they finished shifts or while taking a break in the staff lounge. Field researchers distributed self-

administered questionnaires to those who agreed to participate in this study. The field researchers distributed 340 questionnaires to the subjects, and 310 complete responses were used for the analysis. These respondents represent hospitality employees from different departments including operations (n=190, 61.3%), sales (n=48, 15.5%), administration (n=40, 12.9%), food and beverage (n=8, 2.6%), security (n=7, 2.3%), and others (n=17, 5.5%).

#### IV. Conclusions

##### Results

The measurement model was assessed using confirmatory factor analysis (CFA), and the hypothesized structural models were tested via EQS 6.1 statistical software. Comparative fit index (CFI), Tucker-Lewis index (TLI), and incremental fit index (IFI) values of .90 or higher, and a root mean square error of approximation (RMSEA) value of .08 or less are used as indicators of good model fit (Hair et al., 2006). The measurement model test demonstrated a good fit to the data:  $\chi^2(685) = 1,185.5, p < .05$ , CFI = .93, IFI = .93, TLI = .92, RMSEA = .05. Convergent validity was established since all indicators loaded on the proposed factors were significant and higher than .5, and the average variance extracted (AVE) values were all above the recommended value of .5 (Bagozzi & Yi, 1988; Hair et al., 2006). The composite reliability of each factor exceeded the threshold (.7) recommended by Hair et al. (2006), indicating satisfactory construct reliability. Satisfactory discriminant validity was also demonstrated as the AVE for each construct was higher than all of the squared correlations between any pair of constructs (Fornell & Larcker, 1981).

The primary reason for utilizing second-order factor models is to provide a more parsimonious and interpretable model with fewer parameters (Gustafsson & Balke, 1993; Rindskopf & Rose, 1988). The second-order factor model of this study demonstrated a good fit:  $\chi^2(723) = 1,329.7, p < .05$ , CFI = .91, IFI = .92, TLI = .91, RMSEA = .05. In addition, statistically significant positive relationships between the four first-order (low-order) factors and the second-order (high-order) factor (i.e., corporate social responsibility, CSR) exist as evidenced by the following high standardized factor loadings: .73 (economic), .88 (legal), .74 (ethical), and .55 (philanthropic) ( $p < .05$ ). A similar result was found for the five dimensions of internal marketing. Statistically significant positive relationships between the five first-order factors and the second-order factor (i.e., Internal Marketing, IM) exist as evidenced by the following high standardized factor loadings: .68 (Welfare System), .69 (Training), .82 (Compensation), .81 (Communication) and .83 (Management Support) ( $p < .05$ ). Consequently, the nine proposed first-order CSR and IM dimensions accurately represent the underlying concept of CSR and IM, supporting Hypotheses 1 and 3 that hospitality employees tend to view CSR as a combination of these four dimensions and IM as a combination of these five dimensions.

After identifying the well-fitting measurement model, the relationships among all observed and latent variables in the proposed model were tested using structural equation modeling (SEM). The result showed a good fit to the data:  $\chi^2(723) = 1,317, p < .05$ , CFI = .92, IFI = .92, TLI = .91, RMSEA = .05. As shown in Figure 1, examinations of path estimates revealed that hospitality employees' perceptions of both IM and CSR had significant direct effects on their organizational commitment (OC) ( $\beta = .26$  and  $\beta = .39$ , respectively,  $p < .05$ ), supporting Hypotheses 2 and 4. Furthermore, OC had a significant negative direct effect on turnover intentions (TI) ( $\beta = -.57; p < .05$ ), supporting Hypothesis 5. Lastly, both IM and CSR had significant negative indirect effects on TI



via OC ( $\beta = -.15$  and  $\beta = -.22$ , respectively,  $p < .05$ ), indicating OC fully mediates the relationships between IM and TI as well as between CSR and TI.

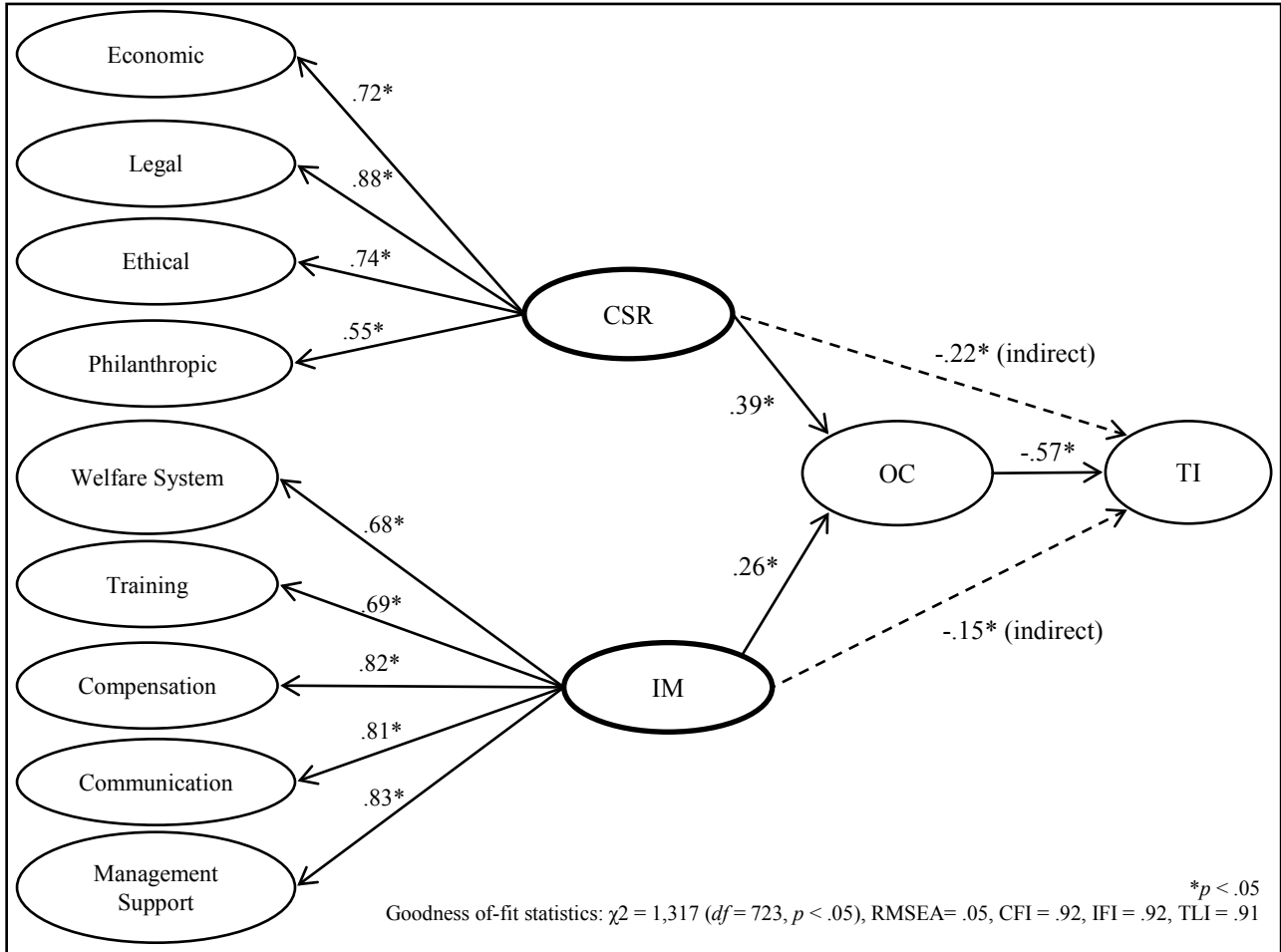


Figure 1. Estimation of Structural Model

### Discussion

The current study investigated the effects of internal marketing (IM) and corporate social responsibility (CSR) programs on hospitality employees' organizational commitment (OC) and their turnover intentions (TI). Based on social identity theory, CSR, and IM literature, this study developed a model and found CSR programs (four dimensions) and IM programs (five dimensions) positively influence organizational commitment, which in turn reduces negative turnover intention in the hospitality industry. From a theoretical perspective, these findings support previous studies (e.g., Ajay & Sabir, 2009; Brammer et al., 2007; Hogg, 1996; Turker, 2009; Vakola & Nikolaou, 2005), contributing to the stream of research related to CSR and IM. Of practical significance, this study suggests hospitality managers can improve their employees' organizational commitment via well-executed internal marketing and CSR programs, which can lead to lower turnover rate.

The findings also suggest some issues that deserve further discussion. First of all, hospitality employees participated in this study perceived CSR as comprising all four dimensions (i.e., economic, legal, ethical, and

philanthropic responsibilities) which is consistent with Carroll's (1991) model. That is, hospitality operators should evaluate and implement various CSR in these four areas to meet their employees' expectations. Second, it is worth noting that employees' perception of CSR programs had a stronger direct effect on organizational commitment as well as stronger indirect effect on turnover intentions than their perception of internal marketing programs did. Since improving existing IM or introducing new IM programs such as welfare system can require a long-term effort and high costs, initiating achievable CSR programs can be effective short-term strategies for a hospitality company to promote employee commitment. For example, initiating and publicizing a company's volunteer activities can make employees feel proud of working for the socially responsible company. Third, this study suggests hospitality companies need to find ways to execute CSR and IM simultaneously and incorporate them in daily businesses, so that they can be part of the company's culture. For example, satisfactory communication and management support were found to be important IM dimensions as well as ethical and philanthropic CSR dimensions in this study. To meet these needs, a hospitality company can use pre-shift meetings for employees to share their impressive experience or ideas related to ethical and philanthropic activities with their colleagues and supervisors. Then managers and executives can support this story-telling approach by recognizing those who shared the greatest stories as role models and rewarding them (e.g., volunteer king/queen of the month and ethical employee of the year).

It should be noted that this study has some limitations. First, CSR and IM were measured based on the perceptions of employees who may not be well-informed about the CSR and IM programs of their company. Future studies may attempt to provide workshops about CSR and IM programs of subject companies before surveying their employees. Second, the study sample was collected from employees working for one of major hospitality companies located in South Korea. Thus, the findings of this study may not be generalizable to hospitality employees in other jurisdictions. Based on the research framework provided in this study, other researchers can conduct cross-cultural studies with employees working for a hospitality company located in other countries.

## Limitations

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# Market Structure Extraction from User-Generated Online Reviews

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## Abstract

Online reviews have become an important source for marketing managers to understand of customer preferences. The aim of this research is to derive market structures and obtain customer insights from user-generated online reviews. Market structure is generally demonstrated by identifying brand switching behaviors. In this study, we consider brands visited and reviewed by a same customer as potentially substitutable and in competition. We track down reviews for fashion brands made by each customer on a Chinese review website, and map the market structure through multi-dimensional scaling (MDS). Results show high face validity with relatively small samples compared to methods employed in previous research. The approach may also be used to identify similar brands for both within-category and across-category, which will be useful for practitioners to set marketing strategies overarching an array of different product categories.

**Keywords:** market structure, multi-dimensional scaling, online reviews, Chinese market

# A Review of Brand Extension Fit Research: Methodological Perspective

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## Abstract

Brand extension is a popular strategy used in marketing. While employing brand extension, the main key for success is fit. However, there is no systematic review on researches of brand extension fit in the past relevant literatures. In order to better understand its development and application from the methodological perspective, the study reviews the literatures of brand extension fit from top journals of marketing. We use the SALSAs (Search, Appraisal, Synthesis and Analysis) method for systematically collecting and analyzing literature. According to the sample papers, we discuss and analyze by focusing on research design and time series, and so on. The results show that (1) longitudinal perspective is ignored; that (2) experiment is the most frequently conducted design; and that (3) most published sample articles are from *Journal of Business Research*. Therefore, further focus on brand extension fit is suggested for future study in marketing.

**Keywords:** brand extension fit, research methodology, SALSAs systematic literature review

# A Review of the Application of Transaction Cost Economics in Franchise Research

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## Abstract

The present paper developed a Scientometric analysis on the Franchising research grounding on the Transaction Cost Economics (TCE). Our research used a systematic literature review with the SALSA (Search, Appraisal, Synthesis and Analysis) and Snowballing methods. Results from analyzing 39 sampled papers showed that: (1) TCE is applied most frequently to hierarchical governance issue, followed behavioral and technological uncertainty and asset specificity; (2) International Franchising management seems interested by researchers, cross-nations research community has been generated in franchise; and that (3) Sort out the most important references and contributing scholars in this area, we found that the top 10 most frequently cited authors in our research sample constitute a diverse expertise set from a variety of disciplines, suggesting a good example of theoretical integration on the Franchise phenomenon. Implications on future research were discussed.

**Keywords:** Transaction Cost; Franchising; SALSA method

# **Design of Competitive Strategy through the Companies**

## **Requirements and Value Chain Analysis in the e-Book Market**

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### **Abstract**

While an e-book market has recently continued a steady growth, many variables such as enforcement of fixed book price system, introduction of digital textbooks, supply of smart devices and OSMU(One Source Multi Use) spread of contents of e-books occur in Korea and other countries. However, there are not many studies on strategies to support the e-book industry in which it belongs to the analog-based publishing industry and attributes of advanced digital contents are intensified. This study derived the policy implications and market strategies by analysis the e-book companies requirements & the value chain structure, in order to revitalize the e-book market in Korea. Specifically, we examined the prospect of e-book market in Korea, current situations of production and distribution, awareness of service utilization and requirements for support policy with targets of 30 e-book companies. As a research, the most needed item for e-book companies is 'PR and marketing support to enter and open the markets' (27%), which is the highest. 'Financial support such as labor costs and business expenses' and 'support for retraining personnel to develop the expertise in respective fields' are followed and they account for 22%. Currently, the most effective support item is the external support program (35%) and funding power (30%) is followed. Unlike a paper book market, e-book is turned into a platform business in terms of the value chain. In particular, public library and the global distribution platform' service model was stronger influence in the e-book market. There are some opinions in which e-book rental services in public libraries are positive for e-book market. However, some other opinions are slightly more dominant in which monthly rental services of global distributors such as Amazon are negative. While it is expected that purchase of e-books in public libraries will be an axis of the B2B market, it is thought that unlimited rental services of global distributors may not revitalize the domestic market but disturbs the ecosystem of the market. In terms of prospect of the market compared to that last year, 52% of respondents think that the e-book market will be improved. 28% and 20% of respondents think that the e-book market will be the same or worse, respectively. Thus, the potential of the e-book market is still highly appreciated. Based on these research content, e-book market activation and corporate competitive strategy was derived as follows : First, literacy reinforcement about



SNS marketing and e-pub3 authoring tool. Second, statistical DB construction of retail sales channels. Third, diversification of the billing system. Fourth, The quality of the e-book content certification.

**Keywords:** e-book, market strategy, value chain, e-pub3

## I. Introduction

While the scale of paper book market is consistently reducing in the publishing industry of Korea, that of e-book market is constantly enlarging. Since this is common phenomenon found not only in Korea but in many publication powers such as US, Europe, Japan, etc, the digital conversion of publishing & printing business is no longer unfamiliar. However, the number of paper book types converted and published in e-book is still not so large. While the number of e-book published in Korea in specimen copy -2011 was about 300,000(since some 200,000 types of paper book are converted and published in e-book, only 80,000 types of e-book are genuinely published as such)(Yoon,2012, p.95), most of e-book is in the genre like romance, fantasy, etc. Since it depends on petty and small editors or self publishing company, the quality of contents is inferior to editing design of paper book. Further, less compatibility caused by each distributor which follows viewer system rather than standardized DRM is one of the reasons that impede the expansion of e-book. Thus, it is difficult to view the current growth of e-book market positively and it is necessary to consider why excellent e-book contents are not released in rush in the publishing market. The most accurate and efficient method to check this matter is to investigate expert in the site, namely, the most difficult point when producing e-book for e-book business, the support necessary for publication. To grasp complicated ecology structure of publishing industry which is evolving from paper book to e-book, this study intends to analyze the value chain of CPND and to identify the structural difference between paper book and e-book. Further, after grasping the requirement necessary for production & distribution of e-book by posing questionnaire to 30 e-book businesses in Korea, the strategy to activate e-book ecological system is drawn out.

## II. Theoretical Background

### e-Book Support

Notwithstanding the outcome of some study that e-book is new content whose material property is different from that of paper book, the ground on which the government supports the production of paper book is equally applied to e-book. Thus, e-book business is given partial politic favor, although it is business of private market. However, many e-book companies still suffer difficulty in getting independent business and self-generation power. The study to solve this situation is necessary. Such study, namely, the investigation of requirement of e-book companies and their business activity is important for the following reasons. First, in the viewpoint of CPND ecological system, e-book industry is fusion and complex industry with excellent pervasive effect related to industry. Where, C refers to contents, P refers to platform, N refers to network and D refers to device and e-book lies in all of these 4 areas to attempt the joint growth of these areas. Second, the tory borne by e-book, namely, storytelling as original contents has excellent OSMU effect and added value. Like paper book, e-book has potential to be expanded to diverse media. Compared with analog based paper book, it can digital be

converted to contents more promptly. Third, as digital paradigm changes, the paper book business based on the existing analog basis needs manpower of certain level and technical support to leap toward e-book business based on digital basis. Small-scaled publishers and new e-book companies bear relatively higher burden in the aspect of cost and time in the changing system of value chain. Fourth, while the expansion of book-reading media with paper book plays positive role in cultivating book-reading, which needs qualitative growth of e-book rather than its quantitative increase. To pursue book-reading society, it is required to make contents which meet readers' diverse tastes and requirements. More fundamentally, it is necessary to grasp the needs of e-book companies which are to produce such complicated contents.

### **CPND and Value Chain**

As CPND is a concept that views one IT related industry in 4 divided areas of Contents, Platform, Network, Device to build ICT governance(Korea Communications Commission, 2012, p.157), ecosystem in ICT industry is realized on the premise of existence of value chain called C-P-N-D. It can be said that ecosystem is built as the entities of the existing value chain make diverse activities and relations through cooperation and competition(Ministry of science, *ICT and Future Planning*, 2013, p.6). CPND is important, because the core functions scattered in each industry in the complicated modern fusion and complex IT society can be integrated by organic connection among CPND to push forward efficient industrial cultivation(Choi, 2014, p.7). Namely, the new business conglomerate which was not included in the existing value chain can be classified by grasping the CPND value chain and politic support may be provided to lagged area by comparing the degree of activation in each area or future development of ecosystem may be estimated. Global IT businesses like Amazon, Apple, Google already built their own ecosystem to have Lock-In effect not only to consumers but also to partners, pursuing sustainable business model(Jeong, 2015, p.30). Although platform & network area currently occupies large portion in e-book market in Korea, the position of contents is expected to be higher later with platform(Kwon & Na, 2015, p.51). While ecosystem based on these platform & contents area is built, political intervention for joint growth and horizontal regulation among each area of C-P-N-D is partially necessary. This is because no area can be alienated in CPND and network and device have significant issue respectively. Namely, the former has network neutrality and the latter has Internet of things.

### **III. Method**

This study derived the policy implications and market strategies by analysis the Korea's e-book companies requirements & the CPND value chain structure, in order to revitalize the e-book market in Korea. Specifically, we examined the prospect of e-book market in Korea, current situations of production and distribution, awareness of service utilization and requirements for support policy with targets of 30 e-book companies. The questionnaire was sent by e-mail from December 2014 to February 2015 to get response. All items were prepared to allow plural responses.

### **IV. Analysis Result**

#### **Survey Analysis**

Posing questionnaire to e-book companies, the following outcome is found in the market prospect. First, when they are asked to prospect the sales in e-book market of Korea in comparison with previous year, they answer improvement(52%), same (28%), aggravation (20%), showing that the opinion on improvement of market situation is still high overwhelmingly. Second, when they are asked to prospect the overall e-book market in Korea, they answer very positive(4%), positive(28%), common (32%), negative(36%), very negative(0%). This answer may imply that although they preview that market would be improved in e-book sales, they are gradually more concerned about actual deficiency of market that is qualitatively immature. Asked why they thought e-book market negatively, more than 50% of them answered the poor book-reading culture where people do not read books and the issue of viewer installation and standardization(30%), lack of e-book contents(10%). On the contrary, they positively viewed e-book market on account of growth potential of e-book market(40%), domestic advancement of the advanced platform like Amazon (25%), the influx of digital contents society (25%).

Asked what genre of e-book they mainly produced, they answered novel, child, foreign language in 14% respectively as the highest rate which was followed by science, liberal arts, essay in 10% and art(6%), management, travel, self-development, home(4%). The average term of production is below 30days(50%), 1-2 months(35%), 2-3 months(10%), 3-6 months(5%), which implies that they prefer e-book that can be easily and promptly made without spending long time. Asked which format they mainly used for production, the use of e-pub2(50%) was overwhelmingly high and PDF file(22%) was also used and e-pub3(20%) was still less used. Asked why they do not adopt e-pub3, they answered, difficulty in viewer embodiment and burden in cost and time, lack of use in the relevant business circle. Asked which resource they would use later, they answered video(26%), image(21%), sound(18%), open API (12%) and font/design, 3D modeling, factor of LBS.

Asked which platform they mainly used in distribution, Kyobo book center is notably high with about 40%, Ridibooks(15%), Yes24(10%), Upaper(10%), which shows that overseas distribution platform like Amazon, Google Play, App Store is still less used. Such platform is mainly used due to high recognition(30%), objective publicity and recommendation service(30%), followed by reliability in sales counting and payment of the charge(15%) including easy and simple trade process, low fee, connection to the genre property. Asked which DRM is proper to activate e-book distribution, application for only the certified buyer without concept of download(25%) is highest, download in limited times and play by only limited & certified terminal (22%), download in unlimited times and terminal for which no certification is required (19%), unlimited download and prohibition of copy and transmission between terminals (17%), Free DRM(17%). This outcome implies that it is prevalently thought that DRM mode should be applied in the least or disappear to activate e-book distribution.

Asked which support of government for e-book company is effective, they answered external support program(34%), funding(30%), planning power(11%) including editing ability, marketing ability, acquisition of excellent author. It is found that 11% of the respondents answered that there was no support. Asked which support is necessary for e-book company, they answered publicity and marketing support to enter market and to find sales route(27%), financial support for labor cost and business expense(22%), support for retraining manpower to cultivate expertise in the relevant area(22%), support for development of new business model and investment inducement(12%), specialized management consulting(5%). The other factors include supporting

office and work space, increased purchase amount of e-book by public library, fixing and sharing standardization.

Finally, asked whether buying only the right to read e-book unlike paper book whose title is bought is proper with respect to the prospect of service, they answered very positive(15%), positive(43%), common(20%), negative(18%), very negative(5%), showing that positive vision on e-book service model where only access right is allowed is more prevalent than negative vision by 2 times. Asked what effect the e-book lent by public library would have on e-book market in the future, they answered very positive(7%), positive (45%), common(7%), negative(26%), very negative(15%), showing contrast of positive prospect and negative prospect. This outcome is interpreted that the vision on the service area of public library varies between company which has sales route and know-how in sales to public library and the other company which does not. Asked in the similar context, what effect monthly regular lending service of global distributors would have on e-book market in the future, they answered very positive(8%), positive(27%), common(15%), negative (30%), very negative(20%). This outcome implies that people generally think that unlike the public interest of public library, the nearly unlimited service of private business gives no profit to general e-book business.

### CPND Value Chain Analysis

In CPND ecosystem, contents area refers to the production of original source including e-book, platform area where such contents are sold and bought refers to website and trade relay, network area refers to mobile communication company and movement of contents, device area refers to hardware manufacturer which produces exclusive terminal and additional service to use contents. They can be arranged as shown in the following Table 1.

**Table 1**

**Stakeholder Role of e-Book Market**

Classification	Role
Contents	e-Book : Text, Sound, Image and Video editing
Platform	Website : Books Sale, Upload, Download and Advertising
Network	Mobile Operators : Image transfer, communication billing
Device	HW manufacturer : Realization of DRM, Format Compatibility and Viewing Technology

Taking the main domestic/overseas businesses as actual cases, Table 2 divides them into CPND areas. In platform and network, some roles are interposed in that the distribution of contents is promoted. Since communication network was opened in Korea after proclamation of network neutrality, the role of platform soared to make most e-book treated in platform. Meanwhile, device area in Korea unlike overseas, the sales of exclusive terminal is lagged in deficit. The main cause of such lagged sales of terminal is the limit of applying e-Ink, propagation of smart phone, the alternative goods, lack of enjoyable contents.

**Table 2**

**e-Book Key Player of CPND Viewpoint**

Classification	Key Player of Korea	Key Player of Overseas
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Contents	Minumsa, Changbi, Sigongsa, 21st Century Books..	Person, Thomson Reuter, Elsevier, McGraw-Hill Education..
Platform	Kyobo, Yes24, Ridibooks, Youpaper..	Amazon, iBooks, Googlebooks, Barnes & Noble..
Network	SKT, LGT, KT, MVNO..	China Mobile, Vodafone Group, Telefonica Group, AT&T..
Device	Biscuit, Sam, Crema, Story-K..	iPAD, Kindle, Nook, Nexus..

In the existing offline based publishing market, the distribution structure of paper book, analog contents, shows relatively simple flow which flows to one direction on the straight line as described in the following Figure 1. Such structure where books are delivered to readers through production, printing and distribution makes the communication between author and reader difficult and is likely to inflate intermediate margin. Further, it is difficult to immediately produce contents by reflecting the latest trend and issue. Needless to say, government may conveniently grasp the interested party of publishing industry, measure each market size & activity details and present prescription, policy and support for inferior entities and problems more easily. Such merits are helpful to tie the large fence of publishing industry. Notwithstanding the constantly decreasing production and consumption of paper book, it becomes the base on which publishing circle may survive with independent know-how backed by governmental support.

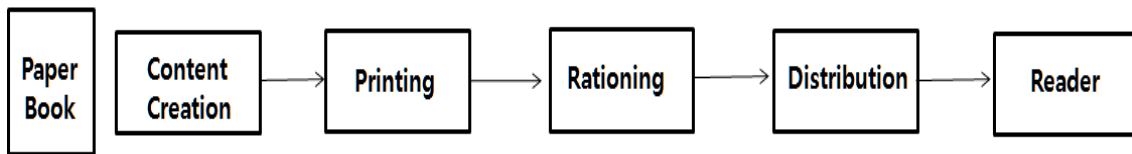
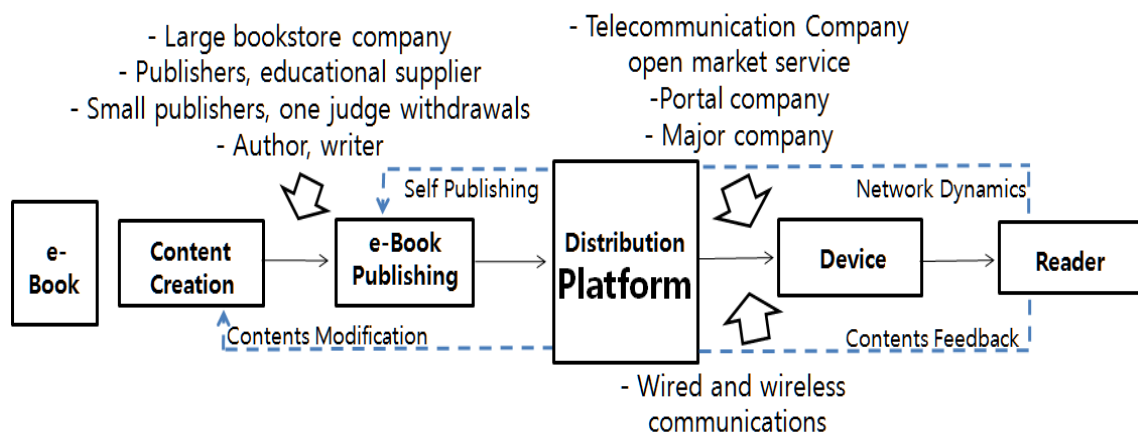


Figure 1. Value chain structure of a typical paper book market(Yi, 2014, pp.10-11)

As e-book market is activated, however, the policy for existing publishing industry changes and publication is required to undergo vehement competition for survival again. Since this is the natural result of the property of e-book, digital contents, it is difficult to support any one entity, because value chain itself takes ecosystem structure based on platform of virtuous circle in e-book market. As diverse interested parties participate, it is very difficult to define the scope of market and the fusion of business where diverse entities act is further intensified, the details of activity itself tend to become obscure. Further, new entities which did not exist in the existing publishing industry appear in e-book market, e.g., terminal and network, the business proprietor related to analog like the existing printers becomes obsolete. Especially, one of the large features is that the power and business activity of the existing major publishers are weakened and the activity of individual author is reinforced in new e-book platform ecosystem. The structure of changed e-book value chain is shown in Figure



2.

Figure 2. Value chain structure and main features of the e-book market((Yi, 2014, pp.10-11; Article modification)

## V. Conclusions

The CPND-based e-book ecosystem of Korea is largely divided into 4 areas, namely, distribution bookstore(on/offline large bookstore like Kyobo Bookstore and Yes 24, Youngpoong Bookstore, bookstore specialized in e-book like Ridibooks, Mekia, Book Cube), provider of e-book contents(special publisher that converts paper book to e-book and releases new e-book and individual author of own publication specialized in genre literature), contents producer(DRM company, e-book format production freelancer, viewer producer, etc), reader group (public library and school purchase, general consumer). Due to the property of e-book, digital contents, these 4 areas cover production to consumption through platform. Thus, this study investigates the activity and structure of interested parties surrounding e-book platform in order to understand ecosystem of e-book industry. Generalizing such outcome of study, it is necessary to first educate the utilization of e-pub3 writing tool and SNS marketing in order to ensure competitiveness of Korean e-book companies. Small and medium Korean publishers are superior in editing paper book than e-book with more experience in the former than the latter. Since they take strategy based on paper book when producing and publicizing e-book, they face

limit inevitably. Although e-book belongs to the same publishing industry, its attributes are basically different from those of paper book. Thus, it is required to help these publishers at the beginning of market formation so that they may be accustomed to make and sell e-book. Second, it is necessary to build the statistics of distribution/sales network. In Korea, the annual publication market size, number of new publication, sales quantity, etc of paper book are counted by Korea Creative Content Agency(KOCCA), Publication Industry Promotion Agency of Korea(KPIPA), Korean Publishers Association(KPA). However, the statistical data of e-book is kept by private group, Korea Electronic Publishing Association(KEPA) only. As e-book company is not obliged to report, the collected data is incomplete. Thus, the political support should be complete by building reliable market statistics. Third, the charging system needs to be diversified. Unlike paper book, consumers need to pay several charges for e-book, e.g., rent of terminal, viewer, DRM, network fee, etc. Thus, instead of selling one complete goods like paper book, it is necessary to lower price by taking diverse sales strategies such as access right, lending right, preview service of table of contents, etc through segmentation of contents. It should be recognized that many consumers think e-book must be sold at low price, because e-book has no printing charge unlike paper book. Fourth, the quality of e-book contents should be certified. Since self-publishing is prevalent in Korea at present, it is required to strive to improve the quality of these contents. Although the popularity and sales at low price of e-book are desirable phenomenon, the overall market may be shrunk due to lack of readable contents in good quality. To improve this situation, it is desirable to grant certificate mark for contents quality and service quality by enhancing the e-book certification system currently enforced by Korea Electronic Publishing Association..

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# **Analysis of Micro-Credit Refund (Revolving Fund) in the University: A Case Study of Student Diploma of Business and Entrepreneurship Gunadarma University**

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## **Abstract**

Embedding the entrepreneurial spirit should be done early. Not only the theory but also the practice should be given directly. The aim of this research is to find out the ability of students in refunding a micro credit (revolving fund) that has been revolved to them. The writers use an interview and a questionnaire as the research technique to determine how much the level of the refund and profits in this micro credit (revolving fund). This research shows that students who have already equipped with knowledge theoretically and given training directly in the field are able to carry out the entrepreneurial activities properly so they can refund the credit or the capital for a period of time and get the benefit through a good financial management.

**Keywords:** Refunds, micro credit, business profits



## **A Dyadic Examination of Workplace Incivility Influence on Wellbeing among Dual-Earner Couples**

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### **Abstract**

In this study of 395 dual-earner couples, we examined the effects of workplace incivility on husbands' and wives' wellbeing, as well as the possible mediation by their work-family conflict. The results of a series of structure equation models, based on the Actor-Partner Interdependence Model (APIM), showed that workplace incivility spilled over first and then significantly crossed over negatively to the husbands' and wives' wellbeing through their work-family conflict. The husbands' spillover effects of workplace incivility on work-family conflict were higher than the wives' spillover effects. This study also illustrated that the actor and partner effects of husbands and wives on the hypothesized model were both significant; notably, the husbands' and wives' actor and partner effects of work-family conflict on wellbeing were equivalent. Interpretations and implications are discussed, and future research directions are suggested.

**Keywords:** workplace incivility, work-family conflict, Actor-Partner Interdependence Model (APIM), wellbeing, dual-earner couples

## I. Introduction

Workplace incivility is specified as a violation of workplace normative culture where behaviors are regarded as rude, discourteous, or obnoxious and characterized as low in intensity and ambiguous in their intention (Andersson & Pearson, 1999). The act itself may be equivocal and the target of uncivil behavior may often not be aware of its intent or if it is actually or solely directed toward him or her (Hughes & Vanessa Durand, 2013; Sakurai & Jex, 2012). Examples of uncivil conduct include sarcasm, disparaging tones and remarks, hostile stares, and the “silent treatment” (Lim, Cortina, & Magley, 2008). Workplace incivility induces theoretically harmful effects on organizations and employees, that is, arousing serious research and organizational attention. Incivility causes its targets, witnesses, and stakeholders to act in ways that erode organizational values and deplete organizational resources; furthermore, it causes diminished job satisfaction and organizational loyalty, which promote turnover intentions (Pearson, Andersson, & Porath, 2005). Several studies have revealed that uncivil workplace experiences were associated with negative work outcomes such as reduced job satisfaction, impaired mental and physical health, and increased job withdrawal (Cortina & Magley, 2009; Lim et al., 2008; Lim & Lee, 2011). In addition, Cortina and Magley (2009), Pearson et al. (2005), and Lim et al. (2008) indicated that incivility targets often spend time worrying about the incivility incidents, suffer increased psychological strain, or develop maladaptive coping behaviors such as becoming aggressive or withdrawn. Thus, such reactions at work could potentially interfere with the targets’ ability to meet role demands from their family (Lim & Lee, 2011).

Recent studies have shown that workplace incivility not only affects employees at work but also affects their personal lives (Schilpzand, De Pater, & Erez, in press), their spouses’ marital satisfaction, and WFC (Ferguson, 2012). Although past research has linked workplace incivility to both job-related and health outcomes, few researchers have explored outcomes related to the work-family interface (Lim & Lee, 2011). Therefore, the current study adopted the spillover-crossover approach and employed the Actor-Partner Interaction Model (APIM) analytic strategy to examine a model that conceptualizes the relationship between workplace incivility and current wellbeing among dual-earner couples, and the possible mediating role of work-family conflict (WFC) in that relationship. Specifically, workplace incivility is expected to be negatively associated with current wellbeing for both husbands and wives. Further, WFC is expected to mediate the relationship between workplace incivility and current wellbeing for both husbands and wives, as reflected in both actor and partner effects.

## II. A Spillover-Crossover Model of the Work-Family Interface

The Spillover-Crossover Model (SCM) integrates two lines of spillover and crossover effects on employees’ main life, work and family, and proposes that work-related experiences initially spillover to the home domain and then crossover to the partner through social interaction. Spillover is a within-person, across-domains transmission of experiences from one area of life to another, such as from work to home. In contrast, crossover refers to transmission across individuals within the same domain, such as the satisfaction or strain between

closely related persons (Bakker & Demerouti, 2013).

Studies of spillover effect found that abusive supervision, job demands, and job strain contribute to WFC (Carlson, Ferguson, Perrewe, & Whitten, 2011; Frone, Russell, & Cooper, 1992; Shimada, Shimazu, Bakker, Demerouti, & Kawakami, 2010). Individuals with higher negative affect displayed higher levels of WFC and lower levels of work and family satisfaction (Michel & Clark, 2009). In addition, the negative spillover effect of WFC is associated with wellbeing (Grant-Vallone & Donaldson, 2001; Greenhaus & Parasuraman, 1987) and life satisfaction (Allen, Herst, Bruck, & Sutton, 2000; Frone et al., 1992). Accordingly, perceived workplace incivility induces negative feelings in the employee according to Weiss and Cropanzano's (1996) Affect Event Theory; subsequently, the workplace negative emotion spillover impacts the employee's thoughts, feelings, and behaviors in the home domain. Thus, we propose:

*Hypothesis 1: Employees' perceived workplace incivility would negatively relate to their WFC, which in turn, would decrease their wellbeing.*

Further evidence for the crossover of negative experience of WFC consists of decreasing parental self-efficacy and perceived quality of parent-child interaction (Cinamon, Weisel, & Tzuk, 2007), the spouse's work and family involvement (Hammer, Allen, & Grigsby, 1997), increasing relationship tension (Carlson et al., 2011), and family stress (Westman, 2005). Hatfield, Cacioppo, and Rapson (1994) referred to an "emotional contagion" suggesting that people are especially likely to "catch" each other's emotions under several circumstances; in particular, Bakker and Demerouti (2013) argued that "emotional contagion or direct crossover is particularly likely, for example, if individuals pay close attention to others, and if they construe themselves as interrelated to others rather than as independent and unique." In other words, a negative crossover of emotional WFC under the assumption of an emotional contagion is particularly likely among close couples. According to the literature, we could argue that if employees feel negative emotion when they are at home, they will tend to reject their spouse and transmit their negative state to them. In this study, we examined the indirect effects of an employee's perceived workplace incivility on the partner's wellbeing. Thus, we apply the process of SCM (Bakker & Demerouti, 2013), which starts with a work experience that spills over within the individual to the home domain, and after that, crosses over between individuals to the partner. Workplace incivility leads employees to worry about the incivility incidents at work, which can reduce their ability to devote full attention to matters at home. They can further become more easily agitated with their family members because of the frustration arising from the mistreatment at work (Lim & Lee, 2011). Research also revealed that workplace incivility worsened employee work attitude and emotion (Porath & Pearson, 2012; Taylor, Bedeian, & Klueemper, 2012) and influenced the harmonious transition between work and family (Beattie & Griffin, 2014; Lim & Lee, 2011), which in turn transfers to the spouse (Cox, Bennett, Tripp, & Aquino, 2012; Demsky, Ellis, & Fritz, 2014; Ferguson, 2012). This suggests that the emotional state of WFC can have a negative impact on the spouse's wellbeing; notably, workplace incivility may not only be harmful to the individual employee but also indirectly affect the partner's wellbeing. Thus, we propose

*Hypothesis 2: Employees' perceived workplace incivility would negatively relate to partners' wellbeing through employees' WFC.*

### III. Method

## Participants

The sample used for the current study consisted of 395 dual-earner couples (790 individuals) in Taiwan. The mean age for husbands was 42.99 years ( $SD = 7.96$ ) and the mean age for the wives was 40.99 years ( $SD = 7.56$ ). The majority of couples had undergraduate (35.1% of husbands and 50.1% of wives) or postgraduate degrees (41.4% of husbands and 26.2% of wives); 85.6% of the couples had at least one child and 29.4% of the couples had preschool children. The mean job tenure for the husbands was 17.73 years ( $SD = 8.08$ ) and the mean job tenure for the wives was 15.74 years ( $SD = 7.55$ ).

## Measures

### Workplace incivility

The Workplace Incivility Scale (WIS) (Cortina, Magley, Williams, & Langhout, 2001), which consists of seven items, was adopted in this study to measure the frequency of participants' perceived disrespectful, rude, or condescending behaviors from superiors within the previous three years on a 5-point Likert-type scale (1 = *never* and 5 = *often*; e.g., "Put you down or condescending to you?"). We employed back-translation methods proposed in previous research (Brislin, 1980) to translate the questionnaire items from English to Chinese. This scale has been found to be reliable in the current study ( $\alpha = .91$  for husbands,  $\alpha = .89$  for wives).

### Work family conflict

We adopted four items from Grzywacz and Marks (2000) using a 5-point Likert-type scale (1 = *strongly disagree* and 5 = *strongly agree*) with statements such as "Your job makes you feel too tired to do the things that need attention at home." The Chinese version of this scale was developed through translation and back-translation by several researchers fluent in both English and Chinese, for example, Ho, Chen, Cheung, Liu, and Worthington Jr (2013). This scale has been found to be reliable in the current study ( $\alpha = .90$  for husbands,  $\alpha = .88$  for wives).

### Wellbeing

The Satisfaction With Life Scale (SWLS) was used in the current study (Diener, Emmons, Larsen, & Griffin, 1985), and consists of five items (Kobau, Sniezek, Zack, Lucas, & Burns, 2010) using a 5-point Likert-type scale (1 = *strongly disagree* and 5 = *strongly agree*) with statements such as "In most ways my life is close to my ideal." The Chinese version of this scale is available on Edward F. Diener's website<sup>1</sup>. This scale has been found to be reliable in the current study ( $\alpha = .91$  for husbands,  $\alpha = .91$  for wives).

## Analyses

Data were analyzed with Mplus Version 7.2 (Muthén & Muthén, 2012) using ML estimation. First, a confirmatory factor analysis was constructed that assessed the measurement model to determine the relationship between the items and the latent constructs. The average variance extracted (AVE) and composite reliability (CR) were also calculated to examine the reliability, internal consistency, and discriminant validity for the

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<sup>1</sup> The Chinese version SWLS archived from:  
[http://internal.psychology.illinois.edu/~ediener/Documents/SWLS\\_Chinese.pdf](http://internal.psychology.illinois.edu/~ediener/Documents/SWLS_Chinese.pdf)

measurement model. The scale was set by fixing the variance of the latent constructs to 1, and all latent constructs were allowed to covary. Additionally, parallel indicators (e.g., first item of WFC for husbands, and first item of WFC for wives) were allowed to covary, given their scaling and content.

Second, once the measurement model was established to fit the data, they were analyzed using structural equation modeling according to the Actor-Partner Interdependence Model (APIM) (Kenny, Kashy, & Cook, 2006), which characterizes the impact of an individual's independent variable on his or her dependent variable as an actor effect, while the impact on the partner's dependent variable is called a partner effect. We assessed an unrestricted APIM-based model that included the indirect paths covering the mediating variables. Then, a series of nested structured models of the data, in which actor and/or partner effects were constrained to be equal for both dyadic partners, were statistically compared with less restricted models using the  $\chi^2$  difference test to examine and contrast parallel actor and partner effects (Kenny et al., 2006). Third, using the information from the unrestricted and restricted structural models, as well as the nested model comparing parallel paths, a final model was established to most fit the data acceptably. Finally, we adopted bootstrapping with 5000 bootstrap samples and bias-corrected confidence intervals to statistically assess the indirect (mediating) effect of the final APIM-based model (Ledermann, Macho, & Kenny, 2011).

#### IV. Results

In the measurement model, three latent variables for husband and wives that resulted in a six-factor model were well fit<sup>2</sup> ( $\chi^2 = 867.600$ ,  $df = 433$ ,  $p < .001$ , CFI = .948, TLI = .940, RMSEA = .052<sub>(.047-.057)</sub>, SRMR = .038). Table 1 shows construct correlation, AVE, and CR. The AVE estimates all exceed the 50% rule of thumb, and CR ranges from .882 for the wife WFC construct to .922 for the wellbeing of both husband and wife. Once again, these exceed .7, suggesting adequate reliability and internal consistency. In addition, all AVE estimates are greater than the corresponding inter-construct squared correlation estimates. Therefore, this test indicates that there are no problems with discriminant validity for the measurement model (Hair, Black, Babin, & Anderson, 2010).

Table 1

Correlations and Descriptive Statistics of Husband Reported (H) and Wife Reported (W) Latent Variables

	M	SD	AVE	(1)	(2)	(3)	(4)	(5)	(6)
(1). Perceived workplace incivility(H)	1.933	.699	.605	(.912)					
(2). Work-family conflict(WFC) (H)	2.681	.782	.692	.412	(.900)				
(3). Wellbeing(H)	3.553	.736	.704	-.394	-.433	(.922)			
(4). Perceived workplace incivility (W)	1.831	.664	.551	.421	.168	-.210	(.893)		
(5). Work-family conflict(WFC)(W)	2.792	.737	.653	.189	.306	-.185	.373	(.882)	
(6). Wellbeing(W)	3.566	.711	.706	-.329	-.273	.479	-.391	-.367	(.922)

Note: N=367 couples. H: husband; W: wife. All correlations are significant  $p < .01$  and the diagonal elements are

<sup>2</sup> Item correlations and the results of estimates of measurement model are available from first authors.

composite reliability (CR).

### Comparing Actor and Partner Effects

To compare and contrast parallel actor and partner effects, a series of nested structural models of the data were statistically compared using the  $\chi^2$  difference test. For each parallel actor and partner effect, a less restricted model (that allowed the parallel actor or partner paths to vary freely) was statistically compared to a more restricted model (that constrained the parallel actor or partner paths to be equal).

An unrestricted APIM-based model of the data, simultaneously evaluating all possible direct and indirect (i.e., through WFC) paths between perceived workplace incivility and wellbeing, showed acceptable fit ( $\chi^2 = 911.475$ ,  $df = 439$ ,  $p < .001$ , CFI = .943, TLI = .936, RMSEA = .054<sub>(.049-.059)</sub>). The restricted model with equal parallel actor and parallel partner effects across spouses provided a good fit to the data ( $\chi^2 = 913.149$ ,  $df = 441$ ,  $p < .001$ , CFI = .943, TLI = .936, RMSEA = .054<sub>(.049-.059)</sub>). For each parallel actor and partner effect, the less restricted model (that allowed the parallel actor or partner paths to vary freely) was statistically compared to the more restricted model (that constrained the parallel actor or partner paths to be equal) and the  $\chi^2$  difference test revealed no statistically significant differences. The model, which added the equality constraint for one actor effect to one partner effect based on the restricted model, demonstrated good fit ( $\chi^2 = 924.768$ ,  $df = 440$ ,  $p < .001$ , CFI = .942, TLI = .934, RMSEA = .055<sub>(.050-.060)</sub>). The results of the  $\chi^2$  difference test,  $\Delta\chi^2(1) = 11.62$ ,  $p < .001$ , indicates that the restricted model represents a significantly better data fit and is more parsimonious.

Given the information from the unrestricted and restricted structural models, as well as the nested models comparing parallel paths, a final model (see Figure 1) equalizing the parallel actor and partner paths was constructed to most closely represent the data. In addition, because there was no statistical difference between any of the parallel actor and partner effects, these pathways were constrained to be equal in the final model to increase statistical power. This model closely fits the data according to both absolute and relative fit indexes, and each individual path within the model is statistically significant.

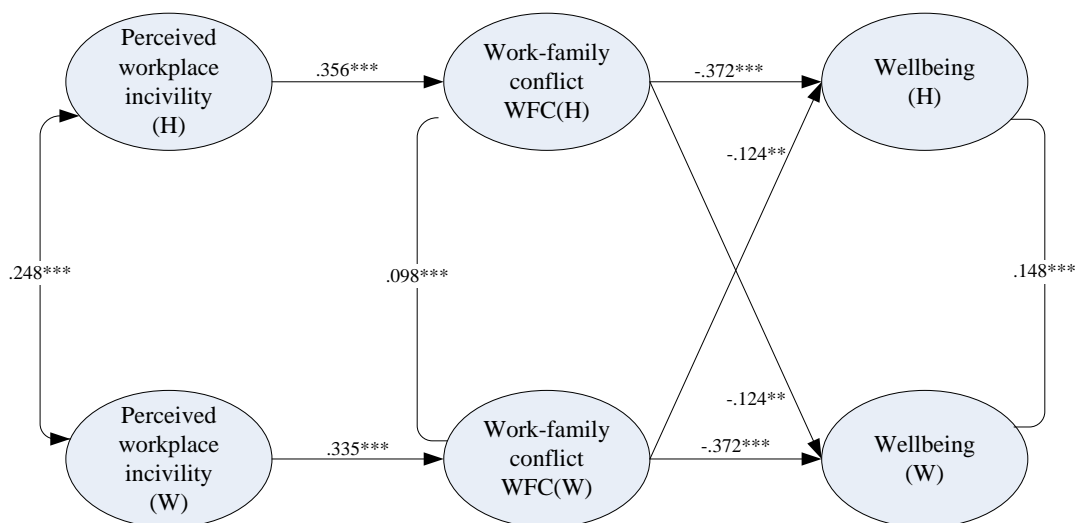


Figure 1. Final structural equation model (All values are unstandardized coefficients)

H: husband; W: wife.  $\chi^2=913.149$ ,  $df=441$ ,  $p<.001$ , CFI=.943, TLI=.936, RMSEA=.054<sub>(.049-.059)</sub>

\*\*  $p < .01$ , \*\*\*  $p < .001$

### Mediation Effect Analysis

The bias-corrected bootstrap 95% CI for the unstandardized effects was used to examine whether the indirect (mediating) effect was statistically significant (Ledermann et al., 2011), and the bootstrap estimates presented here are based on 5,000 bootstrap samples. The indirect actor effects of husband (H) and wife (W) were both significant. The husband's actor effect, that is, perceived workplace incivility(H) → WFC(H) → wellbeing(H) was significant at  $-.133$  ( $SE = .027$ ,  $p < .001$ , bias-corrected bootstrap 95% CI  $[-.186, -.079]$ ). The indirect wife's actor effect, that is, perceived workplace incivility(W) → WFC(W) → wellbeing(W) was significant at  $-.125$  ( $SE = .026$ ,  $p < .001$ , bias-corrected bootstrap 95% CI  $[-.176, -.073]$ ). The indirect partner effect of husband on the wife's wellbeing was significant at  $-.044$  ( $SE = 0.017$ ,  $p = .009$ , bias-corrected bootstrap 95% CI  $[-.077, -.011]$ ). In addition, the indirect partner effect of wife on the husband's wellbeing was significant; the estimated effect was  $-.042$  ( $SE = .015$ ,  $p = .006$ , bias-corrected bootstrap 95% CI  $[-.071, .012]$ ). Finally, we examined the total effects of husband and wife and found that the total effect on the husband's wellbeing, including the actor effect of husband's perceived workplace incivility on his wellbeing and the partner effect, was  $-.177$  ( $SE = .039$ , bias-corrected bootstrap 95% CI  $[-.253, -.101]$ ), while the total effects on the wife's wellbeing was  $-.167$  ( $SE = .032$ , bias-corrected bootstrap 95% CI  $[-.236, -.097]$ ).

### V. Discussion

The current study supports the SCM (Bakker & Demerouti, 2013) arguing that workplace incivility would spill over to the home domain in the form of WFC; and in turn, WFC would cross over to affect the spouses' wellbeing. We adopted the APIM to analyze dual-earner couples at the dyadic level and supported these effects for both husband and wife, that is, the actor effects of workplace incivility on wellbeing individually through WFC and the partner effects of workplace incivility on the spouses' wellbeing through one's WFC.

Our results further showed that the spillover effect of the husband's workplace incivility affected his WFC more than the wife's spillover effect. A review of the literature argues that there are more factors affecting WFC among men than among women, and men's job stress is more likely to spill over and influence other family members than women's negative emotions at work affecting other family members (Aumann, Galinsky, & Matos, 2011; Galinsky, Aumann, & Bond, 2009). Our finding is also consistent with other studies in Asian cultures, such as Lim and Lee (2011), who studied employees in Singapore and found that men experienced greater levels of incivility than women. Ho et al. (2013) examined Chinese dual-earner couples and showed that husbands' WFC was greater than wives' WFC. And Watai, Nishikido, and Murashima (2008) investigated WFC of Japanese technology engineers and found that men experienced more time-based, strain-based, and behavior-based conflicts than women in terms of work interference with family; however, women experienced more conflict in time-based family interference with work.

The equivalent actor and partner effects on the association between WFC and wellbeing could be explained by the similarity of actor and partner effects based on mate selection theory (Eckland, 1982). Married couples are inherently affected by selection effects, which suggest that people supposedly choose their partner not at random and are likely to choose someone who is similar (Wolfinger, 2003). Therefore, these patterns may influence the results in systematic ways (Dennison, Koerner, & Segrin, 2014). Additionally, in the Chinese

culture, a marriage between families of equal social rank is a critical consideration. Married couples are expected to build a harmonious family that is inseparable from a harmonious connubiality and parenthood. Moreover, people are expected to follow the Chinese concept of *ren* or forbearance that affects work and family lives (Wong, 2001); especially wives are expected to have a higher level of *ren* or forbearance in family life than husbands (Li, 2006). Thus, our study revealed that equivalent actor and partner effects could account for the similarity of married couples and implied distinct effects of Chinese culture on married couples' interactions.

### **Implications and Limitations**

This study used dyadic data to study spillover and crossover of the workplace stressor incivility and found both spillover and crossover effects on the wellbeing of each actor individually (actor effect) and on the partner's wellbeing through actor's WFC (partner effect). First, this research extends previous studies by identifying other implications of workplace incivility, in this case the impacts on familial lives of those targeted (Cortina & Magley, 2009; Cortina et al., 2001). Second, we revealed that workplace incivility promotes the spillover and crossover of job stressors; consequently, the partner has an awareness or perception of the stress that a target carries home from the workplace, in this case, WFC. Finally, we found equivalent actor and partner effects on the association between WFC and wellbeing, and we account for this finding by the similarity among married couples, as discussed in the mate selection theory, and by the concept of *ren* or forbearance in the Chinese culture.

Limitations of this study were the self-reported measurements and the cross-sectional design, which precludes causal inferences due to common method variance. However, because the findings correspond to theory-based hypotheses, and because the bivariate correlations between constructs are not high, common method variance should not be a serious threat to the results. Another limitation concerns potential selection biases due to a convenience sampling that is not completely representative of the workforce. The majority of dyadic participants in this study are relatively highly educated dual-earner couples, and one or both members of the couple are working in the public sector; thus, the couple's job security might diminish potential conflict of family financial support. Thus, future studies should try to replicate the results with longitudinal or diary research designs and include more representative participants working in various jobs or industries. Another direction for future research should examine one-earner couples to explore the role of non-working partners in the spillover-crossover process and actor-partner effects. Because our study focused on the strength of the associations rather than the mean scores of the model variables, it can be assumed that the impact of response biases was limited. Nevertheless, the current results should be interpreted with caution because the impact of such biases is unclear.

There are also important practical implications for organizations and their leaders. Most empirical studies revealed the negative consequences of workplace incivility that were related to affective, attitudinal, cognitive, and behavioral outcomes for the targets (Schilpzand et al., in press). Unlike previous studies of incivility's effects within the work domain, our study extended the incivility's impact on the targets' and their spouses' family lives. These findings emphasize the view that organizations must realize the far-reaching effects of workplace incivility and its impact on employees and their families. Organizations should offer complaint practices to their employees and take an active role in discouraging incivility in the workplace by encouraging management to model appropriate behavior and by setting clear expectations about what is and what is not



acceptable behavior among colleagues (Ferguson, 2012). In addition, organizations should provide employee assistance programs, such as counseling, and encourage employees to seek support so that the target can identify tactics or mechanisms for buffering the effect of incivility's stress on the family. Organization might also adopt work-family facilitation practices to enhance employees' personal resources and to consequently buffer the stress provoked by the work and the spillover to family lives; moreover, these practices would help employees to maintain a high level of energy and motivation to invest in their family lives. This practice should further increase employees' positive spillover effect from work to family, which subsequently would crossover to increase their partners' wellbeing and directly benefit the family system.

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# The Effect of Consumer Citizenship and Involvement in Corporate Social Responsibility Activities on Purchase Intention

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## Abstract

This study examines how consumer citizenship and involvement in CSR activities influence their product attitude and purchase intentions through the CSR image. The results indicate that consumer citizenship and involvement in CSR activities have a significant effect on CSR image and consumer citizenship has a significant effect on involvement in CSR activities. The results also show that CSR image has a positive effect on product attitude, while it has no significant influence on purchase intention. The impact of product attitude on purchase intention was supported. This research has focused on the antecedents and consequences of CSR image. According to the results, high consumer citizenship influences involvement in CSR activities and CSR image. The study result provides important implication that marketers should develop programs to improve their consumer citizenship and encourage CSR activities that are more consistent with consumer citizenship.

**Keywords:** consumer citizenship, CSR image, involvement in CSR activities, purchase intention

## I. Introduction

Corporate Social Responsibility (CSR) has gradually become an important issue for both academia and practical purposes. CSR basically refers to who the firm is, what it believes in, and how it is doing business. Implementing a CSR strategy is a critical way to foster a firm's reputation and increases trust (Reputation Institute, 2013). When consumers choose a product, they don't simply compare the price and quality of each product anymore. According to the 2013 CSR Reprtrak results, consumers' willingness to trust and recommend, and feel favorable about a firm is almost 50% driven by their perception of the firm's CSR efforts while only 17% of consumers show the willingness to purchase product and recommend a firm that has a poor CSR reputation.

For this, firms with a better CSR reputation or image have a much higher probability to trigger desired supportive behaviors among consumers, including trusting and fostering favorable attitude toward the firm and

the willingness to recommend and purchase their products. Kim (2014) compares the consumer's perception of a firm credibility and the perception of the firm's CSR reputation. The result shows that consumer perception of a firm's CSR reputation and firm credibility is similar, which suggests that the perception of CSR reputation is as important as corporate credibility. In other words, CSR image is certainly a core element not only for firms to obtain the support from consumers but also to make a difference in consumer's attitude and behavior.

As a result of the increased interest in the CSR concept, the research on CSR image has notably increased in recent years. However, the research on CSR image is still very limited and most research on the CSR image has focused on the consequences of CSR image on consumer behavior. There is little research that examines how a CSR image is formed and which factors affect firms' CSR image.

A consumer citizen is an individual who makes purchasing decisions based on social, economic and ethical considerations. Consumers who have high citizenship will act responsibly when they obtain goods and services (Jurgena & Mikainis, 2011). That is, high consumer citizenship will lead to interest in and attitude toward social initiatives. Despite its apparent importance, the previous research only gave limited attention to consumer citizenship although it may be an important predictor of CSR image. In addition, the previous literature suggests that CSR image can precipitate positive consumer response (e.g., Barone et al., 2000) with positive effect on consumer attitude and behavior (e.g., Lee et al., 2012; Marin & Ruiz, 2007).

Therefore, in light of the fore-mentioned discussions, this study aims to examine antecedents and consequences of CSR image. To begin with, this study investigates which factors affect CSR image as a determinant variable. There has been little previous research on the determinants of a CSR image. To overcome this limitation, this study proposes consumer citizenship and involvement in CSR activities as potential predictors of CSR image. Second, it investigates the consequences of CSR image; product attitude and purchase intention. Third, this study provides further insight on how to effectively implement a firm's CSR strategy.

## **II. Theory and Hypotheses**

### **Consumer Citizenship**

The concept of consumer citizenship is not just about being an informed buyer, but also a self-directed decision maker voluntarily demanding consumer responsibilities and rights (Ross, 2008, p.129-132). The concept goes beyond "the rights of people to be offered proper products and information" it also embraces participation and social responsibility of citizens in the public sectors (Stevenson, 1997). For instance, Shils (1997) defines citizenship as a willingness and psychological readiness to show restraint in the pursuit of selfish interests for themselves and to give priority to the public interest. Also Kim & Lee (2008) define consumer citizenship as the virtue of consumers with a good cause that consists of consumer ethics and participation.

In that sense, the current consumption society has combined both the role of the citizen and the consumer. After all, individual consumers will act as a citizen throughout the consumption process which includes searching for the selection and using the goods and services in the context of the market. Consumer citizenship is also applicable to consumption areas including both private and public sectors. It is very important to understand the mutual relationship between consumer responsibility and rights that constitutes a core concept

of the consumer citizenship. According to Kim & Lee (2008), the consumer citizenship model consists of seven dimensions: 'individual ethics', 'community ethics', 'environmental ethics', 'global ethics', 'individual participation', 'community participation', and 'environmental and global participation'. Based on their research, this study classified consumer citizenship into four dimensions such as 1) autonomy, 2) community spirit, 3) participation, and 4) spirit of tolerance.

First, citizenship in the personal dimension is autonomy. Autonomy is defined as "the capacity to decide for oneself and pursue a course of action in one's life, often regardless of any particular moral content" (Dryden, 2010). Autonomy implicates that consumers make a practical decision after critical evaluation and independently and rationally introspect irrespective of outside pressures and norms (Lee., 1996, p. 98). Second, civil qualities of the community dimension can be seen as a community spirit, meaning responsibility for working toward the maintenance and development of the community beyond personal interests. It is predictable that community spirit will have a positive impact on CSR activities and product attitude (Jung & Yoon, 2014).

Third, according to the terms of participation, a citizen can use it as a tool to make his case in the course of discussions, decision making and taking action on public issues. Furthermore, citizens want to convert private interests into public affairs through participation and will link the positive or negative assessment of the product with the degree of their participation (Jung & Yoon, 2014). Fourth, spirit of tolerance refers to the conscious understanding and acceptance of cultural heterogeneity. It is expected that these dimensions of consumer citizenship create a positive image for a firm's social responsibility activities, consequently leading to a positive attitude toward the product. Subsequently positive product attitude will contribute to the formation of a public trust.

Consumers who have citizenship tend to choose the products that correspond with their values. For this reason, the term consumer-citizen is related to an individual's value structure (Johnson, 2014). Understanding an individual's value structure provides important insights into what influences their expectations and attitudes to support a firm's CSR activities (Basil & Weber, 2006). Prior research suggests that self-transcendent (universalistic and benevolent) values have a positive relationship with expectations of ethical behavior, involvement in CSR activities and product attitude (e.g., Diddi, 2014). People who place higher importance on equal opportunities, tolerance, understanding, protection of the environment, and enhancing welfare are more supportive of CSR activities than other people (De et al., 2014). Therefore, people with high consumer citizenship will be more interested in CSR activities and perceive the firm's' CSR image more positively.

**Hypothesis 1: Consumer citizenship will have a positive effect on firm's CSR image.**

**Hypothesis 2: Consumer citizenship will have a positive effect on involvement in CSR activities.**

### **Effect of Involvement in CSR Activities on CSR image**

Previous researchers viewed involvement as a causal or motivating variable affecting the consumer and communication behavior. Involvement indicates the level of importance an individual places in a stimulus or situation and is defined as the perceived personal relevance of a product and interest in a product, based on

individual's needs and values (e.g., Celsi & Olson, 1998; Zaichkowsky, 1985).

Involvement with different objects leads to different responses. For example, involvement with some products leads to greater perception of that product's importance and choice (Howard & Sheth, 1969). Corporate community involvement leads to a sustained competitive advantage, through the improvement of the firms' CSR and corporate image (Kemper et al., 2013). Research on involvement in CSR activities is still very limited but it has become an important factor in marketing strategies to communicate the firm's CSR activities (e.g., Pomeroy & Dolnicar, 2009). Involvement in CSR activities can be defined as the perceived personal importance in firm's social initiative (e.g., Zaichkowsky, 1985).

According to previous research, involvement in CSR initiatives can improve brand image and lead to a positive evaluation (e.g., Boonpattarakon, 2012). Plewa et al. (2015) consistently reported the positive relationship between perceived familiarity with firm's corporate volunteering and the firm's CSR image. That is, as consumers become more interested in corporate volunteering initiatives, they can evaluate the firms' social initiatives more positively, building a favorable belief that the firm is socially and ethically responsible. This can be explained by the persuasion knowledge theory. For this, it can be inferred that consumers who are highly interested in CSR activities will perceive CSR image positively.

**Hypothesis 3: Consumer's involvement in CSR activities will have a positive effect on firm's CSR image**

### **Effect of CSR Image on Product Attitude and Purchase Intention**

According to cognitive consistency theories (e.g., Osgood & Tannenbaum, 1955), people have a tendency to seek consistency among their beliefs, attitudes, and behaviors. When cognitive inconsistency is experienced, people are motivated to attempt to reduce this dissonance by developing intention and participating in behaviors that are consistent with their beliefs (Festinger, 1962). When consumers attribute a favorable image to a firm supporting CSR activities, they will likely have favorable intentions toward the firm or their products.

The attribution theory also postulates that attribution to a firm's CSR activities has an impact on attitude and behavior. Academic studies on consumer perception of the firm's CSR image suggest potential benefits associated with behavioral outcomes such as product attitude, purchase intention, and loyalty (e.g., Barone et al., 2000; Lee et al., 2012). More specifically, previous studies reveal that a strong CSR image enhances affective attitude (Marin & Ruiz, 2007), brand equity (Hoeffler et al., 2010), loyalty (Lee et al., 2012) and word-of-mouth intention (Plewa et al., 2015). Similarly, consumers' perception of firm's motives for corporate philanthropy positively relates to their attitude towards the firm and their behavior (e.g., Barone et al., 2000).

Consumer attitude is considered as an evaluation of the degree to which one favors the behavior of the product/brand (Finlay et al., 2002). Attitude has drawn extensive attention from the scholars in previous research as it influences consumer feelings, thoughts and decision making process (Bagozzi & Warshaw, 1990). Previous studies find that consumers' attitudes toward advertisements, brands, and products influence their purchase intention and recommendations (e.g., Mitchell & Olson, 1981). Studies also show that consumer attitudes towards retailers have a significant positive impact on purchase intention (e.g., Das, 2014). Therefore, it can be inferred from these studies that CSR image leads to a positive product attitude and purchase intention.

**Hypothesis 4: A firm's CSR image will have a positive effect on attitude toward the the firm's products.**

**Hypothesis 5: A firm's CSR image will have a positive effect on purchase intention toward the firm's products.**

**Hypothesis 6: Product attitude will have a positive effect on purchase intention toward the firm's products.**

### **III. Method**

#### **Measurement**

A total of 304 usable responses were obtained from a sample of 313 consumers aged 18 or older in South Korea. In our sample, 49.7% of the respondents are male and 66.8% of the respondents are 20s to 30s. 58.9% of the respondents are either University students or have a bachelor's degree. The questionnaire items used for this study were measured using the seven-point Likert scale. For the main study, conventional validity and reliability tests were conducted. Based on the Confirmatory factor analysis (CFA) results, we removed some of the items with low factor loadings from the measures. Cronbach's alpha, an indicator of internal reliability, showed that the measures for each construct exceed Nunnally's (1978) threshold value of .70.

Consumer citizenship was operationalized as a desirable consumer's virtue as a member of social community. We treated the concept of consumer citizenship as a second-order construct composed of autonomy, sense of community, participation, and forgiving spirit. The scales for four sub-dimensions of consumer citizenship were adapted from Kim and Lee (2008) and modified for this study. Second-order CFAs showed discriminant and convergent validity of the consumer citizenship measures. The Cronbach's alpha values for the four constructs were 0.85, 0.83, 0.74 and 0.81, respectively, which provided scale reliability.

Consumer perception of the firm's CSR image was operationalized as the degree of consumer's perception of a firm's support of a social cause-related activities. For this construct, six items were incorporated based on Maignan (2001) and Perez & Rodriguez del Bosque (2013). Involvement in CSR activities was operationalized as the perceived personal relevance or importance of a firm's social initiative. For this construct, researchers incorporated 5 items based on a scale from Zaichkowsky (1985). The Cronbach's alpha values for two constructs were 0.94 and 0.91, respectively, showing scale reliability. Finally, attitude toward the product was assessed using three items and purchase intention was measured using four items based on MacKenzie & Lutz's (1989). The Cronbach's alpha values for the two constructs were 0.84 and 0.94, respectively.

#### **Structural Model**

Following the two-stage approach of model validation (Anderson & Gerbing, 1988), measurement validity of each construct included in the structural model was confirmed, allowing us to test the hypothesized model. As indicated by the results of CFA (Table 1), all items loaded significantly on their corresponding latent construct. To obtain discriminant validity, the average variance extracted (AVE) for each factor should be higher than the squared pairwise correlations between factors (Fornell & Larcker, 1981). All of the average variances extracted



are larger than the squared pairwise correlations, suggesting discriminant validity of the factors. The overall fit of the structural model was highly acceptable (CFI=.951, TLI=.943, RMSEA=.049).

**Table 1**  
**Results of the Confirmatory Factor Analysis**

Construct		Estimates	T-value	AVE
Consumer	Autonomy 1	.68	-	.55
Citizenship	Autonomy 2	.74	11.65	
Behavior	Autonomy 3	.81	12.56	.55
	Autonomy 4	.71	11.29	
	Autonomy 5	.75	14.07	
	Sense of community 1	.62	-	
	Sense of community 2	.76	10.74	
	Sense of community 3	.75	10.59	
	Sense of community 4	.81	11.11	
	Participation 1	.68	-	.50
	Participation 2	.81	11.20	
	Participation 3	.61	9.23	
	Forgiving 1	.74	-	.59
	Forgiving 2	.78	13.30	
	Forgiving 3	.78	12.48	
	CSR	CSR image 1	.82	-
Image	CSR image 2	.76	15.80	
	CSR image 3	.82	16.95	
	CSR image 4	.80	16.30	
	CSR image 5	.81	16.93	
	CSR image 6	.80	16.40	
	CSR image 7	.82	17.17	
	CSR image 8	.82	17.09	
Involvement	Involvement in CSR activities 1	.81	-	.69
In CSR	Involvement in CSR activities 2	.75	14.64	
Activities	Involvement in CSR activities 3	.90	18.62	
	Involvement in CSR activities 4	.87	17.90	
	Involvement in CSR activities 5	.80	16.02	
Product	Product attitude 1	.71	-	.62
Attitude	Product attitude 2	.82	15.37	
	Product attitude 3	.82	13.50	
Purchase	Purchase intention 1	.81	-	.64
Intention	Purchase intention 2	.80	17.47	
	Purchase intention 3	.83	16.51	
	Purchase intention 4	.75	14.68	

$\chi^2(df)=875.46$  (504,  $p < .05$ ), CFI=0.951, TLI=0.943, RMSEA=0.049

Note: All t-values are significant ( $p < .05$ )

One indicator of all constructs is set to 1 to standardize the measurement scale.

### Hypotheses Testing

To examine the structural relationships, the hypothesized model was estimated. The overall fit of the structural model was highly acceptable. The comparative fit index (CFI) and Tucker-Lewis Index (TLI) values were .945 and .936, respectively, which exceeded the .90 standard for model fit. Also, the root mean square error of approximation (RMSEA) was .052, which is less than .08, showing a good fit.

Hypotheses were tested using structural equation modeling estimation. As the estimated results provided in Figure 2 show, all the hypotheses except H5 were supported ( $p < .05$ ), as detailed below. It was hypothesized that CSR image will be positively affected by consumer citizenship (H1) and involvement in CSR activities (H3). The results indicate that consumer citizenship ( $\beta = .49, t = 6.06$ ) and involvement in CSR activities ( $\beta = .30, t = 4.06$ ) have a significant effect on CSR image. Consumers with higher levels of consumer citizenship have a more positive image of the firm's CSR activities and perceive that the CSR activities are important to them.

Hypothesis 2 posits the impact of consumer citizenship on involvement in CSR activities, which is statistically supported ( $\beta = .72, t = 10.03$ ). Thus, when consumers perceive that the CSR activities are relevant and important to them, they positively respond to the CSR image of the firm. Hypotheses 4 and 5 propose the effect of CSR image on product attitude and purchase intention and Hypothesis 6 posits the effect of attitude toward the product on purchase intention. The results indicate that CSR image has a positive effect on product attitude ( $\beta = .89, t = 14.73$ ), while it has no significant influence on purchase intention ( $\beta = .17, t = 1.31$ ). The impact of product attitude on purchase intention was supported ( $\beta = .78, t = 5.33$ ).

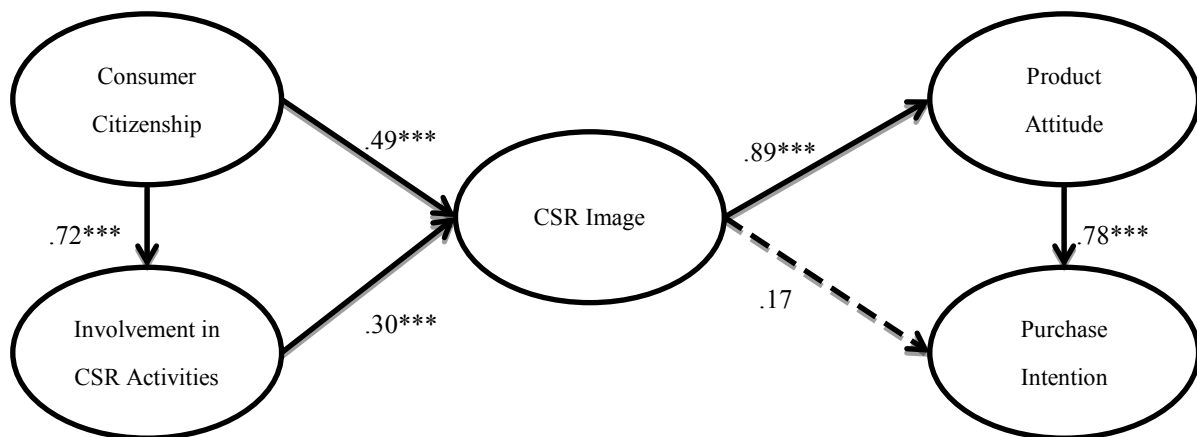


Figure 2. Model Test Results

### IV. Discussion

As the consumer perception of firm's CSR image is an important factor in implementing CSR strategies, understanding the antecedents and consequences of creating positive CSR image carries important strategic importance since people who have consumer citizenship act responsibly when they choose products and services. As active consumer citizen is found responsible for creating positive CSR image, researchers in this field of study may find it necessary to find ways to increase perceived consumer citizenship and consumer perception of CSR activities. However, there is no research to date which examined the relationship between consumer citizenship and consumer perception or behavior in association with CSR activities. This is one principal reason why the present study examines the antecedents and consequences of CSR image.

The study results offer important implications for marketing theory and practice. First, the present study performs a holistic investigation of CSR image by incorporating the roles of its key antecedents such as consumer citizenship and involvement in CSR activities and consequences, namely, product attitude and purchase intention. Second, the results show that consumer citizenship leads to more positive involvement in CSR activities and CSR image. That is, consumers who have a high level of citizenship will perceive the firm's CSR activities as important to them and have a more positive perception toward the firm's CSR image. Mature consumers would pay more attention to CSR activities and ethical consumerism. Thus, understanding more about consumer citizenship will allow marketers to build customized strategies to improve consumer perception of a firm's CSR image. Therefore, marketers should develop programs to promote the consumer citizenship and engage in CSR activities that are consistent with consumer citizenship.

In previous literature, the objectives of consumer citizenship education were reported to include, among others, developing critical thinking, understanding ethical and civil values, as well as the capability to engage in various CSR activities (Jurgena & Mikainis, 2011). Firms may be able to make consumers more engaged in their CSR activities or CRM programs through developing and establishing a consumer citizenship education system. They can accomplish this consumer education goal by promoting PR based corporate sponsorship in the form of supporting public organizations charged with educating consumer's rights and responsibilities.

Third, the findings also show that consumers who have a high level of involvement of CSR activities perceive the CSR image to be more positive and favorable. That is, when consumers perceive that the CSR activities are relevant and important to them, they positively respond to the firm's CSR image. For this, firms should develop CSR activities that are related to consumer's interest to improve the firm's CSR image (Lee et al., 2012). Fourth, this research also focused on subsequent effects arising from a firm's CSR image. The finding will provide practical implications which can help firms to develop effective cause-related marketing strategies. The firms may benefit from creating a positive CSR image which can be utilized as a competitive strength. Furthermore, consumer's familiarity and prior experience with the purchase of CSR embedded products might play important roles in product evaluation. Future studies should consider a more comprehensive framework that addresses how consumers respond according to the level of experience and familiarity.

Fifth, we found that CSR image doesn't have significant impact on consumer's purchase intention toward firms which engage in CSR activities. This finding indicates that consumer's perception of a company's good image may not be good enough to propel it to actual buying. More study need to be done to determine whether consumer's trust toward the firm with CSR initiatives affects the consumer's purchase intention. One potentially important issuer would be whether a firm's good CSR image influences on the level of trust towards the firm.

Finally, this study tries to validate the concept of consumer citizenship (second order construct composed of autonomy, community spirit, participation, spirit of tolerance) with empirical data. It also extends the concept and measurement of consumer citizenship focusing on citizenship of the general public rather than citizenship of other market constituents like marketers or employees. It is also necessary to identify more solid dimensions of consumer citizenship in further research even though this study develops a rigorous concept of consumer citizenship composed of four dimensions and measures.

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# Cross Hedging Stock Sector Risk with Index Futures by Considering Global Equity Systematic Risk

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## **Abstract**

This article investigates the effectiveness of TAIEX futures, Taiwan 50 futures and non-finance non-electronics sub-index futures for cross hedging the price risk of stock sector indices traded in Taiwan stock exchange. A regime switching volatility spillover GARCH hedging strategy is suggested to capture the global equity systematic risk of stock sectors. Empirical results show that non-finance non-electronics sub-index futures exhibits superior effectiveness as an instrument for hedging stock sectors exposure compared with TAIEX futures and Taiwan 50 futures. Simultaneous hedge using both non-finance non-electronics sub-index futures and MSCI world index futures with state-dependent volatility spillover effect from global to domestic markets further improves the hedging effectiveness. This shows the importance of hedging the global equity systematic risk of stock sectors by considering the comovement between stock sectors and global equity market.

**Keywords:** Markov regime switching; multiple futures hedging; volatility spillover; multivariate GARCH; cross hedging

## **Analysis of Musical product selection properties depending on advance ticketing point**

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### **Abstract**

As the performing arts industry is growing along with the increase in national income, the need for studies on the decision making behaviors of performing arts customers are increasing. Especially, according to the investigation result that as the pre-selling of tickets is low, the tickets will not be sold at a cost as the ticket date approaches (Ministry of Culture, Sports, and Tourism, 2008), studies on the alternative assessment process and consumer mentality in the process of decision making are urgent. However, existing studies mostly focused on the situations after the purchase in relation to the consumer satisfaction (Tae Kyu Choi, 2011; Yoon Tae Kim, 2012, etc.). Therefore, in order to analyze the utility of performing arts commodity consumers, this study empirically analyzed the effects of the time of purchase when purchasing musical products on the importance of musical products by their attributes, based on Construal-Level Theory. Also, in order to analyze the importance of musical products by attributes, conjoint analysis was used to conduct the study. Survey subjects were total of 25 people, with pre-test before the actual study started. Construal-Level Theory is the theory that states that the individual interpretation level on the same event varies according to the consumer's psychological distance. This study applied the temporal distance on the difference of ticketing time, and based on previous studies, the desirability of musical products were set as performing actor and seat class, and the venue accessibility and price for the feasibility. As a result, when the advance ticket was purchased long before the performance date, consumers prioritized in the order of class and price > performing actors (cast) > venue accessibility. In addition, regarding the degree of attribute in pre-order purchases, the attributes with higher desirability were more preferred, which follows the CLT that as the temporal distance is farther from object, the more desirability is valued. Meanwhile, this study is significant in the sense that it specialized Construal-Level Theory in performing arts area to investigate the purchasing mentality of audience, also, by proving the consumer perception difference of musical product attributes according to the ticketing time, it can be utilized in the marketing of musical performance product.

**Keywords:** Performing arts, Musical, Advance ticketing point, Construal-Level Theory, Conjoint Analysis

## I. Introduction

The nation's consumption of culture art has steadily increased with the increasing national income. Especially, the domestic performance market has grown considerably for 10 years and it is expected to grow further in the future, because disbursement to cultural life increases as income level is improved and enjoyable recreation time of individual increases. The current domestic performance market is expected to grow considerably due to low cultural consumption compared to advanced country of OECD. Out of domestic performance genre, musical market has explosively grown since the license performance of 'musical Phantom of Opera' in 2002 and the growth rate of market is also higher than that of other genre, recording annual average growth rate over 20% for recent 5 years. For this reason, the portion of musical in domestic performance industry is very large. Since musical market is further exposed to public due to frequent appearance of famous entertainers in musical, the brilliant success of musical market seems more notable. Unlike such brilliant reverse side of musical market, however, domestic musical market has many problems such as abnormal revenue structure and unsystematic production process, superfluous works compared to demand and meager support by government. Besides such productive aspect, there are aspects to be improved in consumption, that is, the composition of spectators is limited to domestic market, different opinion of spectator and producer on the quality and price of performance, many spectators who choose performance on the basis of preferred actor rather than work. The musical industry is typical service industry with strong labor-intensive property that largely depends on human resources than general economic resources (Kang Ki Du, Lee Ji Hee, 2001). Due to the property of service industry where production and consumption are done simultaneously, the study on spectator is most important in the study on musical. What factor affects the spectator's choice of musical goods can be important matter. While this matter has been studied to some extent, most studies are about factor which affects the choice of musical performance itself and performance contents, actor, etc. are mostly studied in large viewpoint.

While domestic musical spectator is poorly studied so, according to the survey of 2008 musical situation published by the Ministry of Culture, Athletics and Tourism and Art Management Support Center, it is found that if ticket sale is low after booking, the case of 'sales promotion by additional discount/package goods' is 68.2% and 'to fill the residual seat with invitation ticket' is 59.1% and 'to fill the residual seat with on the spot sales on the day' is only 27.3%. This implies that unless ticket is sold by booking in domestic musical, it is difficult to get charged spectators as performance date gets nearer. Due to the property of performance goods which commences designated performance irrespective of the number of spectators in the hall, the above result of survey means considerable loss of musical business. As stated above, it is responsible for the overall aggravation of financial state of musical industry. Thus, the study related to spectators' booking time is necessary, but it is hardly studied in the country. Thus, this study intends to investigate what attributes of musical goods are considered most important by consumer depending on booking time and which attributes they prefer mostly by using the most prevalently-used conjoint analysis among the methods to analyze consumer's utility. The intent is to induce booking and to promote the increase of the charged spectator by commanding different



marketing strategy depending on booking time as per result of study.

## **II. Theoretic background**

### **CLT (Construal Level Theory)**

As relatively recent psychological theory first suggested by Liberman and Trope in 1998, CLT is a theory which states that the personal interpretation level for same case varies depending on consumer's psychological distance (Liberman, Trope, 1998), where psychological distance is composed of Temporal distance, Spatial distance, Social distance and Hypothetical distance. The 4 factors of psychological distance respectively includes the aspect, namely, how near is the temporal distance between self/other object and case, how near is the temporal distance between other object and case(=tomorrow vs. 1 year later), how near is the spatial distance(=Seoul vs. New York), how near is the social distance(=intimate friend vs. stranger), how near is the hypothetical distance(=actual case vs. imaginary case)(Kim Kyung Jin, 2010). Among them, the difference in consumer recognition has been noted depending on temporal distance and most actively studied. According to CLT, when temporal distance is long, consumer interprets case through high-level construal and when temporal distance is short, they have viewpoint of low-level construal (Liberman, Trope, 1998). The consumer having high-level construal is abstract and general to specific case or products and mainly thinks superordinate without being affected by situation or context (decontextualized)(Ex: "To understand book-reading in 1 year, accumulate knowledge"), The consumer having low-level construal is concrete and specific and thinks subordinate, being considerably affected by situation or context(contextualized) (Ex: "To understand book-reading tomorrow, read letters")(Liberman, Trope, 1998; Fujita et al., 2006; Trope, Liberman, 2010). Such viewpoint of temporal distance may be widely used to predict consumers' behavior.

Namely, temporal distance affects consumer's choice by changing the level of interpreting consumer's specific target or case. When temporal distance is long, the value of desirability of choice alternative is deemed significant & feasibility is deemed relatively significant for situation in near future. Where desirability refers to those related to the positive final goal to attain, but feasibility refers to the degree of difficulty accompanied to reach goal (Liberman, Trope, 1998). According to preceding study, desirability in performance is expectation on quality of performance and feasibility can be said to the price of ticket (Trope, Liberman, 1998).

Thus, this study intends to check whether there is attributing deemed important by consumer and difference in level of preferred attribute depending on booking time after classifying the attribute of musical goods into level of attribute where desirability and feasibility are stressed respectively.

## **III. Study method and survey design**

### **Conjoint analysis**

Conjoint analysis is the most representative method to analyze consumer's utility. Conjoint analysis is a technique that can predict the goods to be chosen by consumer by presuming consumer's utility for each attribute borne by goods as respondents evaluate goods like the process where consumers actually choose and

buy goods(Lee Hun Young, 2013). Conjoint analysis is used to optimize products properties like attributes, level and price of products for consumers. It is broadly used for marketing activity such as market segmentation, setting standard for products positioning and promotion, predicting market share rate (Kim Bu Yong, 2012). Introduced in marketing at the beginning of 1970s', conjoint analysis has been broadly used as analysis means to help marketing decision making in main marketing areas like advertisement, distribution.(Kim Jun Seok, Lee Hun Young , 2005).

Conjoint analysis first decides the main attribute of goods subject to analysis and set the level of attribute to define possible products profile. Then, conjoint analysis is divided into 2 methods of CBCA(Choice-based Conjoint Analysis) and RBCA (Rank-based Conjoint Analysis), the traditional conjoint analysis mode depending on respondents' evaluation method. First, CBCA constitutes choice group of proper scale and the respondents choose the most preferable profile included in each choice group or choose nothing. Its merit is that evaluation is made in the situation quite similar to consumer's actual purchase behavior(Kim Bu Yong, 2012). However, CBCA has demerit that process to presume partial value is relatively complicated and market segmentation is impossible, because utility is presumed in overall level. Thus, the traditional mode, RBCA was used in many existing studies where conjoint analysis mode was used. RBCA has merit that respondent can evaluate preference of profile with discerning power and the measurement of preference by rank better reflects difference between products. Thus, this study will be carried on by using RBCA and employing the 2nd method, comparison of both bodies in consideration of each merit and demerit. In this study, comparison of both bodies was chosen, because the number of attributes and size of level is relatively low and the preference of respondents should be inferred as exactly as possible.

### **Setting variables**

The attributes currently considered by spectators in the country when buying musical goods and the overall attributes in which domestic musical goods are included are contents, place (performance hall), appearing actor (casting), grade and price of seats and date/time. This study was carried on after setting contents and time as controlled variables and the residual attributes, place, appearing actor, grade and price as manipulated variables. As place is accessibility of performance hall considered by spectator (consumer) depending on the CLT and relevant preceding study, it is set as attributes related to feasibility(Kim Kyung Jin, 2010).It is set as attributes related to desirability depending on whether the quality of performance meets that expected by spectator in advance and the appearing actor is the expected actor(Trope, Liberman, 1998). Due to the attributes of grade & price of seats to reveal desirability & feasibility simultaneously, the grade related to quality of performance may be deemed desirability and the price related to utility considered by spectator may be deemed feasibility. Thus, although goods with relatively high grade, but high price may be deemed goods with highlighted desirability and goods with low expected quality of performance due to low grade may be deemed goods of price with low highlighted feasibility(Kim Kyung Ho, 2013). The attributes of musical goods decided so and the level of attributes are indicated in <Table 1>.

**Table 1**

**Attributes and levels of Musical Performance**

Attributes	Levels	Number of levels
Accessibility to performance hall	nearby performance hall	2
	distant performance hall	
Appearing actor(casting)	unknown actor	2
	desired actor	
Grade & Price	VIP-140,000won	4
	R-110,000won	
	S-80,000won	
	A-50,000won	

**Table 2**

**Profiles of Musical Performance selected by fractional factorial design**

Profiles	Appearing actor(casting)	Accessibility to performance hall	Grade & Price
Profile 1	Unknown actor	nearby performance hall	S-80,000won
Profile 2	Unknown actor	nearby performance hall	R-110,000won
⋮	⋮	⋮	⋮
Profile 8	Desired actor	nearby performance hall	VIP-140,000won
Profile 9	Desired actor	nearby performance hall	S-80,000won
Profile 10	Unknown actor	distant performance hall	R-110,000won
Profile 11	Unknown actor	nearby performance hall	VIP-140,000won

As described in analysis method, this study is carried on by selecting comparison of both bodies where profiles are compared in pairs even in RBCA. Then, the number of profile necessary for conjoint analysis is decided by the number of attributes of goods and the level of each attribute. In this study, profile was formed by using full profile method which considers all attributes. In this case, however, it is nearly impossible for respondents to respond, because the number of cases where 16 profiles are compared in pairs is  $16C_2$ , 120 when the number of all profiles is  $2 \times 2 \times 4$ , 16. Thus, this study minimizes the number of profile by using fractional factorial design which presents the least profile. Specifically, orthogonal programming of spss 18.0 was utilized to select 8 profiles in total. Further, 3 verifying profiles were additionally formed to check whether respondents respond consistently and sincerely. The finally designed profile is in <Table2>. Thus, questionnaires are designed so that respondents finally respond comparatively in 31 times.

**IV. Analysis and Outcome**

**Survey method and basic statistics**

The survey was done with 25 respondents for 3 days on December 12 to 14 2014. For survey, questionnaire based on Internet was used and group was divided into 2 by controlling booking time through scenario. Scenario made respondents chosen at random and sampling method is convenience sampling. The respondents were students of department of cultural art management and acquaintances of researcher. Among 20 responses, 5 were excluded from analysis due to insincere & incomplete measurement.

The gender of respondents is female in 85% more than male and respondents over 90% were 20s'. The schooling of respondents is university graduate, attending graduate school in 45% respectively, occupying 90% of all respondents. Further, the occupation of respondents was student in 55%, the highest portion and company employee in 25%. The average monthly household income of respondents is below Won 1 million in 30%, Won 1 million~Won 2 million in 20%, both of which occupy half of the all respondents. It seems that most respondents recognized average monthly household income as their personal income.

### Outcome of conjoint analysis

In this study, respondents were classified into 2 groups, 'booking situation' and 'immediate purchase situation' through scenario to clarify the difference in recognizing the importance of musical goods attributes between 2 groups. Thus, the response result of 2 groups classified per purchase time was analyzed respectively to compare the result value.

**Table 3**

**Estimates of part-worth and relative importance in booking situation**

Attributes	Levels	Part-worth	Importance(%)
Appearing actor(casting)	Desired actor	0.583	20.0
	Unknown actor	-0.583	
Accessibility to performance hall	nearby performance hall	-0.5	19.0
	distant performance hall	0.5	
Grade & Price	VIP-140,000won	1.083	61.0
	R-110,000won	-1.167	
	S-80,000won	-0.167	
	A-50,000won	0.25	

According to conjoint analysis of group that responded in 'booking situation', Pearson's R value is 0.617 showing the explanatory power of model is not bad and significant probability is 0.052 meaning that it is significant in the level of 10%. The relative importance and partial value of each attributes level of musical goods are in <Table 3>. The analysis showed that consumers put the largest importance to 'grade and price' in 61% among 3 attributes, followed by actor (casting) in 20% and accessibility to performance hall in 19%. Namely, in booking situation, consumers put importance in the order of grade & price> actor (casting)> accessibility to performance hall.

In the partial value of each attributes, with respect to actor (casting) attributes, they are found to prefer

desired actor (casting) to unknown actor. This is result which coincides with the existing study related to CLT that desirability should be considered more than feasibility if the viewing time is farther from purchase time of goods. Further, in the attributes of accessibility to performance hall, distant performance hall is preferred than nearby performance hall, which may be result that coincides with problem of study that when booking time is farther, the attributes related to feasibility are less considered. In the attributes of grade and price, VIP-Won 140,000 is found to be most preferred. As stated in survey & design, it can be seen as attributes level where desirability is higher when grade is high and price is expensive in the attributes of grade and price. Thus, the highest preference of VIP-Won 140,000 in the booking situation which is far from viewing time may be deemed coincident with CLT. However, when desirability is lowered from VIP-Won 140,000 to A-Won 50,000, preference is not lowered, but it is lowest at R-Won 110,000 and gradually rises when price approximates to A-Won 50,000, showing V form instead of straight form. This shows somewhat unexpected result which does not follow CLT.

**Table 4**

**Estimates of part-worth and relative importance in immediate purchase situation**

Attributes	Levels	Part-worth	Importance(%)
Appearing actor(casting)	Desired actor	0.562	17.0
	Unknown actor	-0.562	
Accessibility to performance hall	nearby performance hall	-0.125	32.0
	distant performance hall	0.125	
Grade & Price	VIP-140,000won	0.062	51.0
	R-110,000won	-0.187	
	S-80,000won	-0.312	
	A-50,000won	0.437	

According to conjoint analysis of group that responded in 'immediate purchase situation', Pearson's R value is 0.804, showing the explanatory power of model is good and significant probability is 0.008 meaning that it is significant in the level of 5%. The relative importance and partial value of each attributes level of musical goods in immediate purchase situation are in <Table 4>. The analysis showed that consumers put the largest importance to 'grade and price' in 51% like booking situation, followed by accessibility to performance hall(32%), appearing actor(casting)(17%). Namely, in immediate purchase situation, consumers put importance in the order of grade & price> accessibility to performance hall > actor (casting).

In the partial value of each attributes, with respect to immediate purchase situation, they are found to prefer desired actor (casting) to unknown actor. According to CLT, since whether actor is preferred or not is attribute related to quality of performance, it was expected that the partial value of unknown actor would be higher in immediate purchase situation, but it was found that desired actor is more preferred. This result may be deemed to reflect the abnormally deformative structure of domestic musical in comparison with other advanced countries where musical with tendency of depending on actor (especially, actor) is developed. The result of

study may be different from expectation due to lack of samples. Further, in the attributes of accessibility to performance hall, distant performance hall is preferred than nearby performance hall like the result of booking situation. This is also opposite to CLT and the following result may appear for lack of samples. Finally, A-Won 50,000 was found to be most preferred in the attributes of partial value of grade & price. Thus, if grade is lower and price is cheaper in the attributes of grade & price, feasibility will be higher. So, if A-Won 50,000 is most preferred in immediate purchase situation, it may comply with study hypothesis that feasibility is deemed more important if viewing time and purchase time are nearer. However, when feasibility is lowered from A-Won 50,000 to VIP-Won 140,000 like booking situation, preference is not lowered, but it is lowest at S-Won 80,000 and gradually rises when price approximates to VIP-Won 140,000, showing preference in V form.

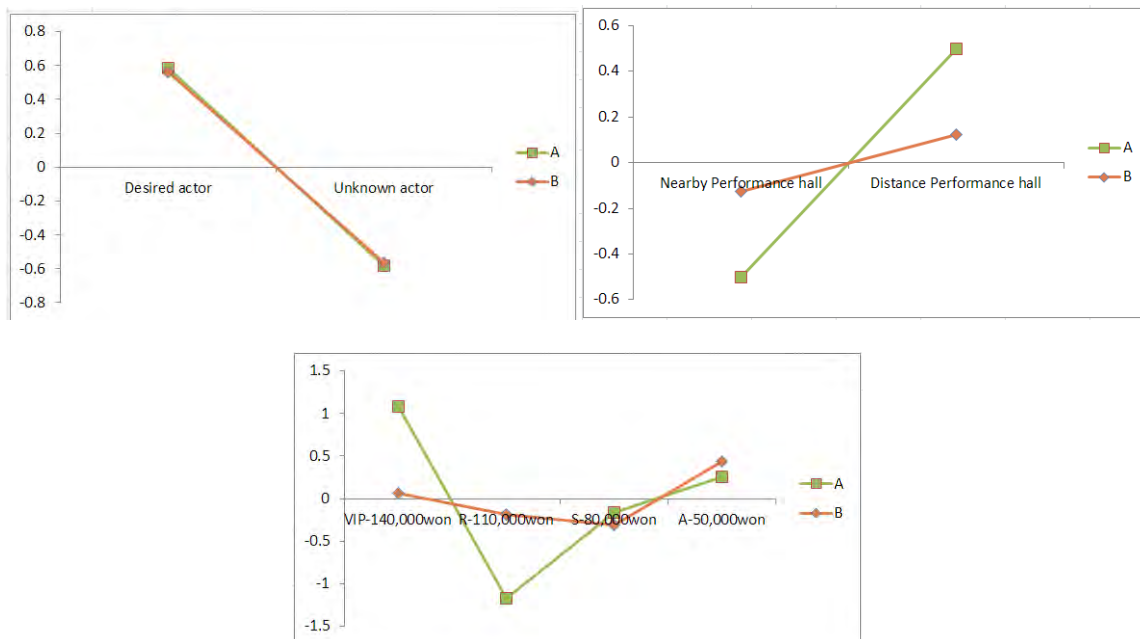


Figure 1. Comparison of part-worth according to advance ticketing point

The graph that generalizes and compares 2 study results in booking situation and immediate purchase situation is <Figure 1>. First, the importance for each attribute of musical goods in booking situation is in the order of grade & price > actor(casting) > performance hall. In the immediate purchase situation, the importance is in the order of grade & price > accessibility to performance hall > actor (casting). Thus, when booking time is near viewing time, the importance of accessibility of performance hall related to 'feasibility' rises.

The value of each attributes of accessibility is found to prefer nearby performance hall with relatively high feasibility in immediate purchase situation rather than booking situation to support study hypothesis. When comparing booking situation with immediate purchase situation in the attributes of grade & price, goods with higher feasibility in immediate purchase situation, namely, goods in low grade with low price are found to be preferred. This result also supports the study hypothesis based on CLT. However, it is necessary to note that all graphs show V form in booking situation and immediate purchase situation. In the case of R-Won 110,000 and S-Won 80,000, consumers may be further affected by other attributes of goods, because neither desirability nor feasibility is clearly biased to one side. In the case of VIP-Won 140,000 and A-Won 50,000, the former is goods

with high desirability and the latter is goods with notably high feasibility. Thus, consumer may be affected by booking time when selecting goods. So, the attributes of accessibility to performance hall and those of grade & price are confirmed to support the study result related to the existing CLT and the hypothesis of this study. However, it was found that appearing actor(casting) among attributes of musical goods is hardly different depending on booking time. As stated above, actor largely decides the quality of performance expected in advance than any other attributes of musical goods. The aspect of production may be the study outcome caused by deformative form of domestic musical that relies on actor considerably in the aspect of production.

## V. Conclusion and suggestion point

### Summary of study

This study sets study problem based on CLT to check whether booking time affects the importance of attributes of musical goods considered by consumers. To analyze the importance of attributes of musical goods, conjoint analysis methodology was used to carry on study. As CLT is theory stating that the level of understanding specific target or case varies depending on consumer's psychological distance, the difference in consumer's recognition depending on temporal distance among psychological distance has been studied actively. According to the preceding study, while consumers put importance to the value of attributes related to desirability among chosen alternatives when temporal distance is long, they put importance to the value of attributes related to feasibility for future when temporal distance is short(Liberman, Trope, 1998; Trope, Liberman, Wakslak, 2007). In this study, desirability of performance is attribute related to expected quality of performance and feasibility is set as preceding study value, the cost to view the performance(Liberman, Trope, 1998). Desirability is set as appearing actor(casting) & grade, feasibility is set as accessibility to performance hall and price.

According to conjoint analysis, when booking time is far from viewing time, consumers put importance to in the order of grade & price > appearing actor(casting) > accessibility to performance hall. In the case of booking situation when booking time is near viewing time, consumers put importance to in the order of grade & price > accessibility to performance hall > appearing actor(casting). In the case of booking, the partial value of each attribute prefers performance with desired cast than unknown actor. IN the case of accessibility to performance hall, distant performance hall is preferred than nearby performance hall and grade & price in VIP-Won 140,000 is most preferred. As the level of attributes whose desirability is set high in general is further preferred, CLT that desirability is given more importance when temporal distance is longer from the target may be deemed to be observed. On the contrary, in the case of immediate purchase, the partial value of attribute level of each attributes shows numerically almost same level of preference with booking situation in the case of appearing actor. Appearing actor out of musical goods attributes is found not to be affected by booking time. Accessibility to performance hall also showed unexpected result, i.e., distant performance hall is further preferred than nearby performance hall. However, when comparing accessibility to performance hall with partial value of booking situation, nearby performance hall with higher feasibility is more preferred, which may be deemed to comply with CLT. Further, unexpected result may be caused by lack of sample number. Finally, in the immediate purchase situation, grade and the partial value of price showed notable difference when compared

with booking situation. It is found that A-Won 50,000 with the highest feasibility, low grade and the lowest price is most preferred, supporting the study hypothesis stating that feasibility is deemed more important when temporal distance from target is short.

### **Theoretic and practical suggestion point**

This study can contribute to the study related to musical in the following aspects. Since performance art has not yet been studied much in Korea, the study on performance art area, especially on musical has borrowed the format of universal papers of business administration or has been done mainly in case study. Like many studies related to general consumer goods, however, it is essential to grasp consumer's mental state to utilize in promotional activity. Thus, this study may be valuable in that it specializes CLT in performance art area among psychological theory to identify spectator's purchase psychology. While among studies carried on general consumer goods with some luxury goods in the country based on CLT, 'payment time' as variables is added. When buying musical ticket, it is actually impossible- booking is done in advance and payment is deemed viewing-, but it is included in this study. Thus, it was difficult to apply study result to marketing. Further, relevant study is limited, because desirability and feasibility are merely set as grade and price. Solving the problems of preceding study to some extent, this study attempted to reflect as many attributes of musical goods as possible by including 'appearing actor' in desirability and 'accessibility to performance hall' in feasibility. Namely, this study partially clarified that CLT is corroboratively applicable to domestic musical industry. It may be meaningful in that it considers the property of musical goods, adds variables and otherwise applies analysis method.

This study practically suggests to musical industry as follows. Since attributes of goods with high feasibility (goods of high accessibility to performance hall, goods with low price) are preferred when purchase time is near viewing time, marketing may be enforced to increase charged spectators by employing discount policy to residents near performance hall or employees of nearby company when performance gets sooner. On the contrary, when there is long time to performance, goods of high desirability tends to be considered. Thus, to induce booking, it is required to apply low discount rate to seat with high grade and high price and discount sales need to be applied mainly to seats of low grade and low price in order to increase charged spectators. As domestic musical suffers chronic financial difficulty, it is essential to induce booking so as to ensure stable financial state.

### **Limit of study and future direction of study**

Although this study can be helpful to domestic musical study through the above study result and suggestion point, it is subject to the following limit. First, diverse variables related to booking time among attributes of musical goods need to be developed. This study sets performance site as accessibility to performance hall to control desirability & feasibility, but another variable like brand image of performance hall may exist. Second, it is required to study more systematically how respondents recognize in advance the variables set by researcher. It is necessary to check in advance whether respondents significantly recognize the difference in booking time depending on presented scenario. Further, in the case of accessibility to performance



hall of musical goods attributes, clear operating definition is necessary through prior experiment. For convenience, this study simply divides nearby performance hall and distant performance hall, but if definite distance & spending time to reach performance hall is presented, respondents may better recognize. Thus, prior survey of this matter is also required. Third, conjoint analysis method was used in this study and analysis materials were collected by using comparison of both bodies. However, respondents tended to be very tired, because the number of comparable profiles is high in spite of low number of attributes of this study and attributes levels. Thus, it may be compose questionnaire so that respondents may respond more comfortably to collect exact materials in the next study.

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# **Exploring the Mediating Effect of Organisational Citizenship Behaviour on the Relationship between Downward Influence and Satisfaction with Supervision**

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## **Abstract**

The purpose of this paper is to examine the effect of downward influence tactics of superiors in Malaysian companies on the satisfaction of subordinates with supervision. The literature review revealed that downward influence tactics are useful but practically challenging. Researchers have identified downward influence tactics such as inspirational appeal, consultation, exchange, pressure, ingratiation, and rational persuasion as the common influence tactics used by superiors to change the behavior of their subordinates. By understanding the effects of different influence tactics, this can provide guidelines for superiors in adopting the most suitable influence tactics to increase subordinates' satisfaction. The organisational citizenship behaviour as a mediator between downward influence and its outcome was explored in the proposed framework.

**Keywords:** Downward influence tactics, Satisfaction with supervision, Organizational citizenship behavior

# Downward Influence and Supervisory Satisfaction: Investigating the Mediating Effects of Employee Organisational Citizenship

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## Abstract

The purpose of this paper is to examine the effect of downward influence tactics of superiors in Malaysian companies on the satisfaction of subordinates with supervision. The literature review revealed that downward influence tactics are useful but practically challenging. Researchers have identified downward influence tactics such as inspirational appeal, consultation, exchange, pressure, ingratiation, and rational persuasion as the common influence tactics used by superiors to change the behavior of their subordinates. By understanding the effects of different influence tactics, this can provide guidelines for superiors in adopting the most suitable influence tactics to increase subordinates' satisfaction. The organisational citizenship behavior as a mediator between downward influence and its outcome was explored in the proposed framework.

**Keyword:** Downward Influence Tactics, Satisfaction with Supervision, Organisational Citizenship Behavior

## I. Introduction

This research examines the effect of downward influence on satisfaction with supervision in Malaysian companies. We developed the proposed framework by exploring organisational citizenship behavior as a mediator between downward influence and its outcome. Although there have been several studies that have explored the relationship between downward influence and satisfaction of supervision, hitherto, there has yet to be any study that examined the mediating effects of organisational citizenship behavior on such relationship. Influence is defined as a person's (an influence agent or leader) behavior designed to change another person's (an influence target or member) attitude and/or behavior. Although in many occasions the term "influence" is

used interchangeably with power, Podsakoff and MacKenzie (1995) demonstrated that power alone is not sufficient in explaining a leader's effectiveness in influencing people. To further understand how leaders influence people, a leader's influence behavior and skills must be considered as well. Effective leaders are skilled enough to recognise when to use different types of influence as well as the skills necessary to effectively carry out these influence tactics (Yukl, 1989). Acknowledging these needs, scholars started examining the specific types of behavior used to exercise influence.

Previous studies have begun to examine the specific types of behaviors used to exercise influence rather than focus exclusively on power (Yukl, 1998). A number of researchers have identified categories of proactive behaviors called influence tactics (Kipnis, Schmidt & Wilkinson, 1980; Schriesheim & Hinkin (1990); Yukl, Falbe & Youn, 1993; Yukl & Tracey, 1992). These works seem to infer that influence is important in all human relationships and it has become an integral part of organisational behavior and has generated great interest for the behavioral theorist. In any organisation, various aspects such as role differentiation, work direction, reward, supervision, discipline, organisational change and performance review involve different influence tactics. Research has also shown that effective leaders must have the ability to recognise when to use different tactics of influence as well as the skills necessary to effectively carry out these influencing attempts (Bolino & Turnley, 2003; Kipnis, Schmidt & Wilkinson, 1980; Yukl, 1998; Yukl & Falbe, 1990). Moreover, in terms of using downward influence tactics effectively, several empirical studies strongly advocated that the most effective manager in organisation should understand the nature of influence, the type of influence tactics available to them, and the "how" and "when" to use those tactics (Case, Dosier, Murkison & Keys, 1988; Kaplan, 1986; Kipnis & Schmidt, 1988; Mowday, 1978; Schilit & Locke, 1982; Yukl & Falbe, 1990). Recently, more research has sought to examine the specific influencing tactics used by superiors to effect changes in the decision and actions of their subordinates. These works seem to infer that influence is important in all human relationships.

Of late, supervisory satisfaction has received extensive attention in organisational research. The need to investigate satisfaction is justified in the observed relationship between levels of job dissatisfaction, absenteeism, grievance expression, tardiness, low morale and high turnover. Dissatisfaction with supervision is an antecedent of intention to leave a job. Unsatisfied workers are more prone to leave their jobs compared to their satisfied colleagues (Gangadhraiah, Nardev, & Reddy, 1990; Martin, 1990; Padilla-Vellez, 1993). Retention and turnover of staff, particularly highly-skilled personnel are important issues for managers in any organisation (McBride, 2002). In contrast, employees who experience supervisory satisfaction are more likely to be productive and stay on the job (McNeese-Smith, 1997). Furthermore, satisfied employees tend to have more innovative ideas to help organisations improve further by participating actively in decision-making (Kivimaki & Kalimo, 1994). Therefore, employees' satisfaction is an important workplace construct and one that is of concern for effective management. Clearly, from the human relations perspective, supervisory satisfaction is one aspect of satisfaction and is related to the personality traits of the superior such as his or her temperament, openness, industriousness and pleasantness. The positive side of all of these traits can enhance subordinates' satisfaction with their leader's supervision.

Studies on organisational citizenship behavior focusing specifically on interpersonal relationships have

been driven by the conviction that sound superior-subordinate relationship is crucial to organisational success. Positive interpersonal relationship at the workplace can enhance positive organisational citizenship behavior (OCB) among employees. Subordinates with high levels of OCB are more likely to be committed to the organisation (Smith, Organ & Near, 1983; Williams & Anderson, 1991). Therefore, it is worthwhile for the superior to take cognizance of the downward influence in work situations and how it promotes supervisory satisfaction as a negative outcome may lead to organisational dysfunction such as decline in work performances, absenteeism and high turnover (Lamude, 1994; Motowidlo, 2003). So far, no studies have investigated OCB as the mediator that relates downward influence with supervisory satisfaction in Malaysian workplace settings. Thus, this research is carried out with the intention of achieving greater understanding of OCB that will allow superiors to better achieve their objectives of maintaining subordinate satisfaction with their supervision. While there exists a substantial amount of research within the context of upward influence, little attention has been given to linking the issues around downward influence. By knowing how downward influence tactics is related to its consequences, this would enable a superior to consider changing or maintaining his/her influence tactics in order to achieve certain desirable outcomes.

The major motivation of this research is to examine the influence tactics employed by superiors in Malaysian companies and how these associations maximise organisational outcome. More specifically, it seeks to answer the following research questions:

- Are there any significant differences in subordinates' satisfaction with supervision when the subordinates are subjected to various tactics of downward influence?
- To what extent does organisational citizenship behavior mediate the relationship between downward influence tactics and supervisory satisfaction?

The justification for this present study is that there have been far too few studies done to investigate the correlation and consequence of employee OCB in the Malaysian workplace settings. By adopting the appropriate influence tactics, superiors can acquire a better understanding of OCB and enable them to achieve their objective of maintaining employee satisfaction. Secondly, this research is conducted in a Malaysian context with its diverse social and organisational cultures. It will be interesting to look at how the Malaysian workforce responds to different influence tactics as social behavior is normally implanted and entrenched in the given society.

This research is important in addressing questions confronting our industrial society such as enriching the skills of managers to enable them to act with greater proficiency in dealing with and through people especially their subordinates? One way of looking at this issue is from the perspective of influence. The organisational influence relationships involve top management, middle-line managers, and support staff. The main concern is then the interpersonal interactions that occur across organisational levels characterised by the phrase "superior-subordinate relationships". The attention to interpersonal relationships is due to our belief that sound superior-subordinate relationships are important and synonymous with the humanistic and cooperative work environment sought by contemporary managers. It is also believed that positive interpersonal relationship at workplace can increase subordinates' satisfaction with supervision. Subordinates with high levels of satisfaction are more likely to be committed to the organisation (William & Anderson, 1991; Smith, Organ &

Near, 1983).

The present study would be of interest to others because the differences in the perception of influence carry implications in their own right. This is because the superior's use of influence tactics may be reinforced by their subordinates' responses or the superior may anticipate subordinates' reaction to the downward influence tactics used. It is worthwhile for the superior to be aware of the existence of multiple sources of influence in work situations and how they promote subordinates' satisfaction with supervision since a negative outcome by itself could lead to many organisational dysfunctions such as decline in work performances, absenteeism and high turnover (Lamude, 1994; Motowidlo, 2003). According to Williams and Anderson (1991), the superior's tactics of influence with his/her subordinates and subordinates' satisfaction with supervision and OCB are interrelated. The different approaches of influence styles can trigger negative consequences, which can further increase sensitivity and susceptibility to misunderstanding, which in turn increases dissatisfaction. Thus, the prevention of a negative outcome from subordinates is important when dealing with different influence tactics. This then becomes a vicious cycle that many organisation leaders need to address downward influence tactics and its consequences more systematically.

### **1.1 Objectives of this Study**

The delineation of the research question is examine the downward influence tactics employed by superiors in Malaysian companies and how they affect subordinates' satisfaction. This research also provides information about the appropriateness and effectiveness of each tactic as it pertains to specific situations (Yukl, Kim & Falbe, 1996). This study also seeks to fulfill the following research objectives.

1. To investigate the significant differences in supervisory satisfaction when subordinates are subjected to downward influence tactics.
2. To assess how organisational citizenship behavior can strengthen or weaken the relationships between downward influence tactics and supervisory satisfaction of subordinates.

## **II. Theoretical Framework and Literature Review**

This section reviews the relevant constructs and variables as well as their interactions involving downward influence tactics: (1) The Concept of Influence; (2) Downward Influence Tactics; (3) Mediating variables such as organisational citizenship behavior and (4) The key dependent variable related to this study is supervisory satisfaction of subordinates.

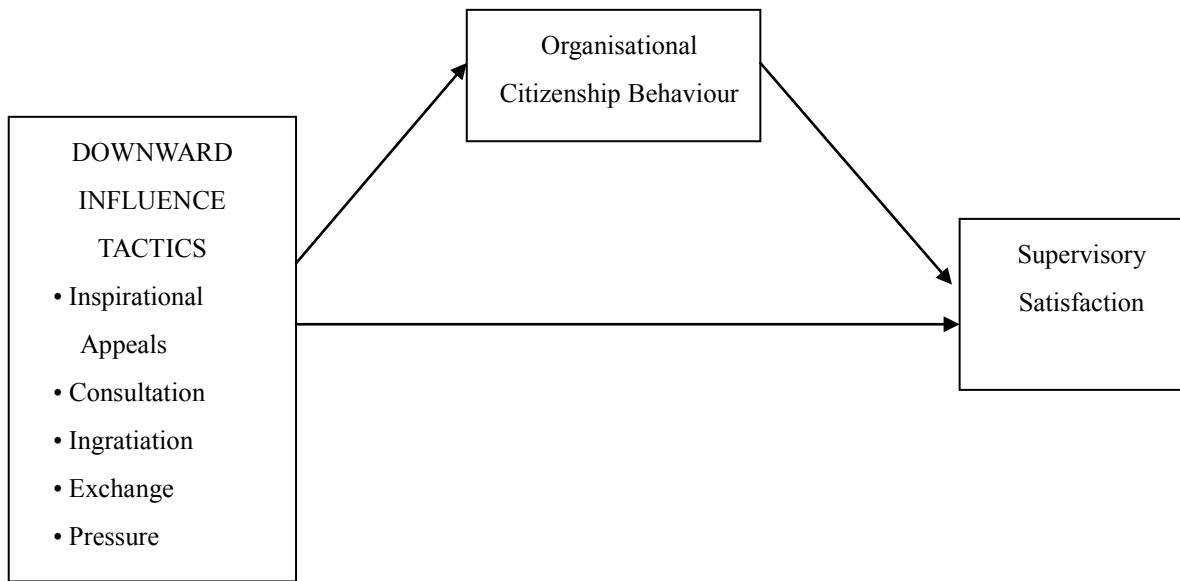


Figure 1. Proposed model of Organisational Citizenship Behavior and interactions

## 2.1 The Concept of Influence

### 2.1.1 Influence Theory.

In general, influence is defined as an influence agent behavior designed to change an influence target attitude or behavior. It is a process by which people persuade others to accept their advice, suggestions, beliefs and values (Schriesheim & Hinkin, 1990; Wren, 1995). The capability to influence others is essential for managers. However, the influence process is often complex and difficult to predict. The effectiveness of an influence attempt is based on the perceptions held by various individuals and the interaction of multiple variables. Goffman (1955) introduced to the behavioral sciences, the notion that people consciously manage the impressions they convey to others in interpersonal interactions.

### 2.1.2 Influence and Influence Tactics

The influence process comprises of three important components. These are the influence tactics used, the skill of the person in applying these methods, and the perceptions of the target individuals. The responses of the target individuals rely on their evaluation of the situation and the consequences likely associated with their behavior. Many types of conscious behavior are predicated on how the target individuals view the sources of influence/power of the initiators. The interest in applying influence tactics in organisational settings began with the categorization scheme put forward by Kipnis, Schmidt and Wilkinson (1980), which identified eight tactics and labelled them as assertiveness, coalitions, exchange, ingratiation, rationality, and upward appeal represent a broad segment of the influence tactic literature because of their widespread acceptance and use. Schriesheim and Hinkin (1990) replicated the study by Kipnis and team (1980) and developed new items to measure the same subscales. Yukl in his many studies (Yukl & Falbe, 1990; Yukl & Tracey, 1992; Yukl, Falbe & Youn, 1993; Yukl, Kim & Falbe, 1996) examined influence tactics from the perspectives of both agent and target, and also extended the work of Kipnis and team by identifying the additional tactics of inspirational

appeal, consultation, legitimating pressure, and personal appeal. Yukl and Falbe (1990) determined that inspirational appeal and consultation were the most frequently used in downward influence tactics. This conclusion coincides with the research results of Hinkin and Schriesheim (1990) who found that consultation and inspirational appeal has significant positive relationships with bases of power such as experts and referent. Work by Yukl and his colleagues indicate that subordinate responses to managers' influence attempts vary along a continuum ranging from resistance to compliance to commitment. However, when appropriately used, influence tactics are typically beneficial for organisational members.

For the purpose of this study, the researcher has chosen Yukl and his colleagues' (Yukl & Falbe, 1990; Yukl & Tracey, 1992) list of downward influence tactics. It is among the most popular ones used in research as shown in Table 1.

**Table 1**

**Definition of influence tactics**

Inspirational appeals	The agent makes a request or proposal that arouses the enthusiasm of the target by appealing to target values, ideals, and aspiration, or by increasing target self-confidence.
Consultation	The agent seeks target participation in planning a strategy, activity, or change for which target's support and assistance are desired, or the agent is willing to modify a proposal to deal with target's concerns and suggestions.
Ingratiation	The agent uses praise, flattery, friendly behavior, or helpful behavior to get the target in a good mood or to think favorably of him or her before asking for something.
Exchange	The agent offers an exchange of favors, indicates willingness to reciprocate at a later time, or promises a share of the benefits if the target helps accomplish a task.
Rational persuasion	The agent uses logical arguments and factual evidence to persuade the target that a proposal or request is viable and likely to result in the attainment of task objectives.
Pressure	The agent uses demands, threats, frequent checking, or persistent reminders to influence the target to do what he or she wants

**2.2 Supervisory satisfaction**

In this study, satisfaction is defined as, "a pleasurable or positive emotional state resulting from the appraisal of one's job" (Locke, 1976, p. 1300). Work satisfaction is an important workplace construct and one that is of concern for effective management. Thus, numerous research findings suggest that conflict management style that is related to various aspects of employee satisfaction is of interest and represent an important extension to the job satisfaction literature. These findings imply that supervisory satisfaction is one of the most important attitudinal issues in the workplace that managers face. Thus, the relevance of



supervisory satisfaction in an organisational setting needs no further explanation. It is a collection of feelings or affective responses of organisational members which is associated with the job situation within the organisation. Smith, Kendall and Hulin (1969), in their well-documented measure titled the Cornell JDI (Cornell Job Descriptive Index), described five areas of satisfaction: the work itself, the supervision, the co-workers, the pay, and the opportunities for promotion on the job. Since the theme of the present study is on superior-subordinate relationship, the job-satisfaction facet that is most relevant to our study is supervisory satisfaction.

Past research on organisation has identified a number of possible antecedent constructs to work satisfaction. These include a variety of actionable work-related perceptions and attitudes. For example, supportive supervision is reported to increase job satisfaction (Johnston et al., 1990). Furthermore, a subordinate with higher levels of satisfaction with supervision demonstrates decreased propensity to look for another job (Sager, 1994) and decreased propensity to leave (Boles *et al.*, 1997). Turnover is a major issue for many organisations (Simmons & Ruth, 1997). It is a problem of considerable importance because of the costs associated with hiring and training new personnel, as well as the costs associated with poor or no performance of the employee towards the organisational goals.

The influence method which the superior uses in an organisation in supervising their subordinates can have a broad impact on the subordinate's attitude towards work, and the kind of relationship formed with the superior. The amount of supervision and direction given to the subordinates will increase their satisfaction with supervision. Conversely, many studies found that domineering or avoidance supervision is found to have a negative impact on the subordinates' satisfaction (Kahn, Wolfe, Quinn, Snoeck & Rosenthal, 1964; Likert, 1967).

### **2.3 Organisational Citizenship Behavior (OCB)**

Bateman and Organ (1983) introduced the construct of OCB, drawing upon concepts of super role behaviors presented by Katz and Kahn (1966). OCB has been defined as an "individual behavior that is discretionary, not directly or explicitly recognised by the formal reward system, and that in the aggregate, promotes the effective functioning of the organisation" (Organ, 1988, p.4). Later, Organ redefined OCB 'as contributions to the maintenance and enhancement of the social and psychological context that supports task performance' (1997, p. 91), and hence, remove the requirements that OCB be discretionary and unrewarded (Motowidlo, 2000). Examples of employee OCB include, accepting extra duties and responsibilities at work, working overtime when needed, and helping subordinates with their work (Masterson, Lewis, Goldman & Taylor, 2000.; Organ, 1988). Organ's (1988) framework and its five dimensions: altruism, conscientiousness, sportsmanship, courtesy and civic virtue have been the subject of a great amount of empirical research ever since (LePine, Erez & Johnson, 2002).

Podsakoff et al. (2000) reviewed the literature on citizenship-like behaviors and identified almost 30 potential different constructs of citizenship behavior; nevertheless, they were able to organise them into seven dimensions resembling much of the classification by Organ and his colleagues (Organ, 1988; Smith, Organ & Near, 1983). One reason for the ambiguity concerning the definition and operationalization of OCB is that the research focused mainly on linking predictors to an overall measure of OCB or to a specific OCB dimension,

rather than carefully defining the nature of citizenship behavior itself and developing a theory that can guide OCB measurement and analysis (LePine, Erez & Johnson, 2002; Podsakoff et al., 2000). Researchers have only recently started to systematically address the question of which OCB operationalization is the most appropriate, and how the different dimensions are related to one another (Coleman & Borman, 2000; LePine, Erez & Johnson, 2002; Motowidlo, 2000).

## **2.4 Hypothesised Relationships**

### **2.4.1 Downward Influence Tactics and OCB**

Influence processes are important for understanding how managers motivate subordinates' commitment and extra effort, according to Bass (1985a). Researchers have discovered that influence tactics are often used by superiors as a means of obtaining personal goals, promoting their own self-interest, exercising social control and changing the behavior of others (Barry & Watson, 1996; Ferris & Judge, 1991; Ferris, Russ, & Fandt, 1989; Kipnis et al., 1980). The successful use of these tactics tends to be able to reduce resistance by the subordinates (Pfeffer, 1981; Tedeschi & Melburg, 1984).

Conceptual and theoretical work in influence tactics research and extra-role behavior has suggested that inspirational appeals, consultation and ingratiation tactics show consistency in enhancing supervisor-subordinate relationship (Kipnis et al., 1980; Kipnis & Schmidt, 1988; Krone, 1992; Tedeschi & Melburg, 1984; Wayne & Liden, 1995; Yukl & Falbe, 1990). Thus, it would be expected that managers' use of inspirational appeals (using emotional language to emphasise the importance of a new task and arouse enthusiasm) would encourage employees to demonstrate OCB. In addition, it would also be expected that managers' use of consultation tactics, which engage employees in the decision-making process, will encourage employees to feel involved and take personal responsibility, and that ingratiation tactics (engaging in friendly behavior toward the target to ensure the subordinate is well disposed toward the leader's request) would be effective in generating positive outcomes from the subordinates (Yukl & Falbe, 1990; Yukl & Tracey, 1992). This is due to ingratiation tactics being used by superior to impress his or her employees with the objective of being better liked (Kipnis, et al., 1980; Tedeschi & Melburg, 1984; Wayne & Liden, 1995). This approach includes flattery, favour-doing, emphasising what the leader has in common with subordinates and de-emphasising the differences (Krone, 1992). Therefore, it would be expected that ingratiation tactics have a positive effect on OCB or extra-role behavior, particularly given the dependence of such behavior on good leader-subordinate relations. Based on the above argument, it can be hypothesised that:

**Hypothesis 1a:** A superior's exercise of the downward influence tactics of inspirational appeals, consultation and ingratiation will have a significant positive association with the subordinate's organisational citizenship behavior.

Other influence behavior such as exchange tactics (offering benefits in return for compliance) does not aim to transform employees' values, but to persuade on the basis of logic or self-interest and thus, they are more closely aligned with transactional leadership, particularly contingent reward. Pressure tactics (using demands or threats) are based on threats or exerting pressure to ensure compliance with a request. There is consistent

evidence that ‘forcing’ influence tactics such as pressure is counterproductive in engaging employee commitment and motivation or OCB (Emans et al., 2003; Falbe & Yukl, 1992; Sparrowe et al. 2006; Yukl et al., 1996; Yukl & Tracey, 1992). These leader behaviors are consistent with an autocratic rather than a democratic style of leadership (Likert, 1961). Likewise, other studies recorded that superior use of legitimating tactics is linked to negative effect on subordinates’ commitment (Yukl & Falbe, 1990; Yukl & Tracey, 1992). Thus, it would be expected that such a tactic would have a negative influence in engaging employees’ OCB, and consequently, the following hypothesis is put forward:

**Hypothesis 1b:** A superior’s exercise of the downward influence tactics of exchange, pressure and legitimating will have a significant negative association with the subordinate’s organisational citizenship behavior.

#### **2.4.2 Downward Influence Tactics and Satisfaction with Supervision**

The influence method which the superior uses in an organisation in supervising subordinates can have a broad impact on the subordinates’ attitude towards work and the kind of relationships they have with their superiors. Influence researchers have found support for a relationship between influence tactics and quality relationship and supervisory performance ratings (Ferris et al., 1994; Wayne & Ferris, 1990, Wayne & Liden, 1995). The amount and quality of supervision and direction given to subordinates will increase their satisfaction with supervision. A few studies have recorded that, supervision to the extent that the superior exercises inspirational appeals and consultation influence styles, is found to have a positive impact on the subordinates’ satisfaction (Kahn et al., 1964; Likert, 1967; Warren, 1998). On the contrary, the pressure and exchange tactics are expected to have a negative association with employees’ satisfaction with the leader. This is because if the superior usually applies pressure tactics, it is assumed that the subordinate does not meet expectations if not actually coerced to perform (Omar, 2007). Additionally, exchange tactics which apply reward-punishment choices are not seem as an inclusive management approach, and thus it is unlikely that subordinate is happy with this approach. Hence, the following hypotheses are offered:

Hypothesis 2a: A superior’s exercise of inspirational appeals, consultation and ingratiation tactics will have a significant positive effect on supervisory satisfaction.

Hypothesis 2b: A superior’s exercise of pressure and exchange tactics will have a significant negative effect on supervisory satisfaction.

#### **2.4.3 Mediating Roles of Organisational Citizenship Behavior**

There is some evidence supporting the possibility of organisational citizenship behavior as a mediator variable in organisational behavior studies. Study conducted by Maharani, Troena and Noermijati (2013) reveal their findings that OCB mediates the relationship between job satisfaction and employee performance. The research findings also agree with Shokrkon and Naami (2009) and Davis and Newstrom (2002) findings that employees who feel satisfy with their work will display greater OCB attitude that eventually affect their performance. Other research shows that job satisfaction affects OCB (Murphy, Athanasou, King, 2002; Begum, 2006;

Zeinabadi, 2010; Salehi and Gholtash, 2011). Therefore, it may be hypothesised that the use of influence tactics that emphasize the importance of consultation and inspirational appeals will have a direct or indirect association with employees' supervisory satisfaction via OCB. Conversely, the exercise of downward influence tactics which include exchange and pressure tactics by stating the organisation's rules in exchange for the completion of duties (Graen & Cashman 1975) might pose indirect association with employees' supervisory satisfaction via OCB. Based on this rationale, the following hypothesis is expected.

Hypothesis 3a: Organisational citizenship behavior mediates the relationship between the downward influence of inspirational appeals, consultation and ingratiation tactics and supervisory satisfaction.

Hypothesis 3b: Organisational citizenship behavior mediates the relationship between the downward influence of pressure tactics and exchange tactics and supervisory satisfaction.

### **III. Research Methodology**

#### **3.1 Description of Methodology**

The sampling population was generated from the master list of factories registered with the Federation of Malaysian Manufacturers (FMM). The sample size used was 271 consisting of executives, managers and professionals who work in Malaysian manufacturing companies as they represent the group of educated people who would be more aware and familiar with the types of influence tactics used by their superiors. The random sampling procedure was used in selecting the elements from the large database and the unit of analysis that used was individual.

The data used in the study consisted of responses to the questionnaire items. The Downward Influence Tactics is Yukl's 44-item Influence Behavior Questionnaire-2000 (IBQ-2000). The OCB scale was developed by Williams and Anderson (1991). It is a 13-item scale that measures the highs and lows of OCB. The instrument used to measure supervisory satisfaction was the updated version of the original Job Descriptive Index (JDI) (Smith, Kendall & Hulin, 1969) which was later revised by Roznowski (1989).

### **IV. Results**

Structural equation modeling with AMOS 20.0 was used to analyse the data. The two-step approach by Anderson and Gerbing (1988) was used where the measurement model was assessed prior to estimation of structural model. While the measurement model provides an assessment of the validity and reliability of the study constructs, the structural model assesses the causal relationships amongst the constructs. The mediation hypothesis in this study was tested using fully identified structural path models. The structural equation modeling approach to examine the mediation was preferred as it allows to examine the proposed model together as a whole, as well as examine each of the path coefficients individually. Moreover, the structural equation modeling approach to mediation takes intercorrelations among the variables into consideration.

#### **4.1 Measurement Model**

Confirmatory factor analysis (CFA) was used to assess the measurement model fit indices. The goodness of fit index used to test for the absolute model fit were chi-square ( $\chi^2$ ), degrees of freedom (df), p-value, and root mean square error of approximation (RMSEA), where the acceptable RMSEA threshold values are 0.08 or below (Hair et al., 2012). In testing the incremental model fit indices, incremental fit index (IFI), tucker-lewis fit index (TFI), and comparative fit index (CFI) were used and the acceptable thresholds are values of 0.90 and above (Hair et al., 2012). Finally, the normed model fit ( $\chi^2/df$ ) test was used to examine the parsimony fit of the model and the acceptable thresholds are values between 1 and 2 (Hair et al., 2012). Results of the overall CFA indicated a good model fit to the data with  $\chi^2 = 712.61$ ,  $df = 405$ ,  $p \text{ value} < 0.01$ ,  $RMSEA = 0.052$ ,  $IFI = 0.944$ ,  $TLI = 0.935$ ,  $CFI = 0.943$  and  $\chi^2/df = 1.760$ .

#### 4.2 Reliability and Validity

The measurement models were tested for convergent and discriminant validity. Table 1 shows the indicators of each measurement model and their respective standardized regression weights ( $\lambda$ ). All  $\lambda$  were significant at 0.05 significance level and ranged from 0.64 to 0.93. Results in the Table 1 indicated that all measurement models met the necessary thresholds of Cronbach's alpha ( $\alpha$ ) of 0.7 (Fornell and Larcker, 1981). This indicated that the measurement models had internal. Additionally, AVE of each measurement model was above 0.5 implying that they have convergent validity (Hair et al., 2012). Discriminant validity was then assessed on each measurement model. Using the Fornell and Larcker (1981) approach, discriminant validity was achieved when the square-root of AVE of the measurement models are greater than the correlation ( $\phi$ ) of the respective measurement models. Results showed that all constructs had discriminant validity.

**Table 2. Measurement Model Results**

Items	Standardized loading	Cronbach's alpha	Average variance extracted
ocb1	0.82	0.89	0.59
ocb2	0.69		
ocb3	0.75		
ocb4	0.74		
ocb5	0.83		
sat1	0.90	0.94	0.84
sat2	0.92		
sat3	0.93		
ins2	0.75	0.90	0.59
ins3	0.77		
ins4	0.76		
ins5	0.72		
ins6	0.83		
ins7	0.76		
con2	0.87	0.89	0.73

con3	0.87		
con4	0.82		
ing1	0.72	0.79	0.56
ing3	0.80		
ing4	0.73		
pre1	0.82	0.80	0.55
pre2	0.71		
pre3	0.73		
pre4	0.69		
leg1	0.75	0.83	0.62
leg2	0.82		
leg3	0.79		
exc1	0.69	0.84	0.57
exc3	0.82		
exc4	0.64		
exc6	0.85		

### 4.3 Structural Model

The SEM model was conducted using maximum likelihood estimation (MLE) on a sample size of 271. The results show that the exogenous constructs explained 40% of the total variance in organisational citizenship behavior and 72% of the variance in supervisory satisfaction. The hypotheses were then tested and results are presented in Table 2.

Referring to table 2, we found that inspirational appeal has a significant positive effect on organisational citizenship behavior ( $\beta = 0.30$ ,  $p < 0.01$ ). Similarly, consultation was found to have a positive effect on organisational citizenship behavior ( $\beta = 0.41$ ,  $p < 0.01$ ). However, ingratiation did not impact organisational citizenship behavior ( $\beta = -0.06$ ,  $p = 0.62$ ). This provides partial support for H<sub>1a</sub>. Hypothesis H<sub>1b</sub> examined the role of exchange, pressure, and legitimating on organisational citizenship behavior. The results showed that while pressure negatively impacted organisational citizenship behavior ( $\beta = -0.15$ ,  $p < 0.05$ ). On the contrary, exchange ( $\beta = 0.04$ ,  $p = 0.56$ ) and legitimating ( $\beta = -0.05$ ,  $p = 0.45$ ) did not influence organisational citizenship behavior. This provides partial support for H<sub>1b</sub>.

Hypotheses	Path coefficient	p-value	Support
<i>Organisational citizenship behavior</i>			
H <sub>1a</sub> : Inspirational appeal	0.30	< 0.01	Supported
H <sub>1a</sub> : Consultation	0.41	< 0.01	Supported
H <sub>1a</sub> : Ingratiation	-0.06	0.62	Not supported
H <sub>1b</sub> : Exchange	0.04	0.56	Not supported

H <sub>1b</sub> : Pressure	-0.15	< 0.05	Supported
H <sub>1b</sub> : Legitimizing	-0.05	0.45	Not supported
<i>Supervisory satisfaction</i>			
H <sub>2a</sub> : Inspirational appeal	0.22	< 0.01	Supported
H <sub>2a</sub> : Consultation	0.29	< 0.01	Supported
H <sub>2a</sub> : Ingratiation	0.01	0.89	Not supported
H <sub>2b</sub> : Exchange	0.05	0.33	Not supported
H <sub>2b</sub> : Pressure	-0.13	< 0.01	Supported
H <sub>2b</sub> : Legitimizing	-0.02	0.69	Not supported
Organisational citizenship behavior	0.45	< 0.01	Supported

We found that inspirational appeal has a significant positive effect on supervisory satisfaction ( $\beta = 0.22$ ,  $p < 0.01$ ). Similarly, consultation was found to have a positive effect on supervisory satisfaction ( $\beta = 0.29$ ,  $p < 0.01$ ). However, ingratiation did not impact supervisory satisfaction ( $\beta = 0.01$ ,  $p = 0.89$ ). This provides partial support for H<sub>2a</sub>. Hypothesis H<sub>2b</sub> examined the role of exchange, pressure, and legitimating on supervisory satisfaction. The results showed that pressure negatively impacted supervisory satisfaction ( $\beta = -0.13$ ,  $p < 0.01$ ). On the contrary, both exchange ( $\beta = 0.05$ ,  $p = 0.33$ ) and legitimating ( $\beta = -0.02$ ,  $p = 0.69$ ) did not influence supervisory satisfaction. This provides partial support for H<sub>2b</sub>. Finally, organisational citizenship behavior was found to positively influence supervisory satisfaction ( $\beta = 0.45$ ,  $p < 0.01$ ).

#### 4.4 Mediation analysis

The results of the mediation analysis show that organisational citizenship behavior fully mediates the relationship between inspirational appeal and supervisory satisfaction (indirect effect:  $\beta = 0.13$ ; direct effect:  $\beta = 0.22$ ; total effect = 0.35). Similarly, organisational citizenship behavior was found to partially mediate the linkages between consultation and supervisory satisfaction (indirect effect:  $\beta = 0.18$ ; direct effect:  $\beta = 0.29$ ; total effect = 0.47). Ingratiation and exchange did not influence supervisory satisfaction either directly or indirectly through organisational citizenship behavior. However, organisational citizenship behavior was found to partially mediate the relationship between pressure and supervisory satisfaction (indirect effect:  $\beta = -0.07$ ; direct effect:  $\beta = -0.13$ ; total effect = -0.20). Finally, organisational citizenship behavior did not mediate the relationship between legitimating and supervisory satisfaction.

### V. Discussion and Implications of Present Study

This study aims to examine the role of superior's exercise of the downward influence tactics on organisational citizenship behavior and supervisory satisfaction. Specifically, we examined the influence of inspirational appeal, consultation, ingratiation, exchange, pressure, and legitimating on organisational citizenship behavior and supervisory satisfaction. The results indicate that which inspirational appeal and consultation have a positive influence on organisational citizenship behavior and supervisory satisfaction, pressure had a negative impact on organisational citizenship behavior and supervisory satisfaction.

The findings of the present study revealed several specific implications. First, the findings suggest that when the superior has a choice in the influence style, he/she focuses on achieving greater satisfaction with

his/her supervision. For example, influence attempts such as inspirational appeal and consultation are expected to be more favorable than pressure tactics. Second, in the selection of a superior to lead a division of work, especially when the work group is highly experienced and skilled, it is expected that certain characteristics or ability will assist in the management of such work groups effectively. It may affect the influence style and the outcomes in a direct or indirect way.

The mediation effect of organisational citizenship behavior (OCB) was investigated and shed light on how the variable has direct and indirect effects on downward influence tactics and the outcome. In an attempt to solicit subordinate super-ordinate effort in the organisation, satisfaction was included as the outcome variable of the study. Relationships must exist to highlight the relevant influence tactics that promote such behaviors in the organisation and this will have great practical significance.

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# An Exploratory Comparative Analysis of Asian Markets: China versus India

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## Abstract

This study investigates the differences in the business environments of the two most populous Asian countries-- China and India--which are also two of the most important economies in the world in terms of size and influence. Although China started its economic reform and development earlier than India did, India is quickly catching up and these two countries have become a battleground for attracting direct foreign investments. An understanding of what is happening in these two countries has become an urgent, important topic in global business. For this study, an exploratory descriptive analysis is performed to cross-examine various economic, demographic, and cultural data of these two giants to uncover both their differences and commonalities.

**Keywords:** Business, China, Culture, Economy, India, Population

## I. Introduction

This study investigates the business environments of two of Asia's biggest economies: China and India. The significance of these two countries for international business can easily be inferred by the massive size of their populations (1<sup>st</sup> and 2<sup>nd</sup> most populous countries in the world; comprising about 37 % of the global population). Their abundant cheap labor has attracted the attention of manufacturing industries worldwide and their rapidly rising numbers of middle income people have opened up a wide range of business opportunities. Although China started its economic reform and development earlier than India, India is quickly catching up and these two countries have become a battleground for attracting direct foreign investments. An understanding about what is happening in these two Asian countries becomes an urgent, important topic in global business. In this study, recent economic, demographic, and cultural data, and also subjective assessments from people who have visited/lived in the countries are examined, and their data are also compared to those of the US as an example of a leading advanced economy.

Although many data sources are used in this exploratory study, the CIA World Fact Book and World Bank Data are relied upon for most of the analysis.

## II. Main Body

### Population

The population of a country is an important starting point for any international business decisions, as size is an indicator for a potential consumer base/market size and has implication relating to the cost and availability of labor in a country. For this study, in addition to the current population size, the fertility rate and demographics are further explored to understand trends of each country's population.

**Table 1. Population Comparison: China and India**

	USA	China	India
Population (Million) (CIA 2014 est.)	319	1,356	1,236
Fertility (CIA 2014 est.)	2.01	1.55	2.51
Demographics (24 years old or younger) (Indexmundi 2014 est.)	33.1%	31.8%	46.6%

**Population.** China and India are the two most populous countries in the world comprising about 37% of global population (calculated based on UN Dept. of Economics and Social Affairs data, 2013). The authors believe the combined population size of these two countries may be even higher than 37% if people not reported in China to avoid the 'one child' policy penalty are properly counted and a better census counting system is available in India. A rapidly rising income level has resulted in a significant portion of their populations moving to a different class of potential consumer.

**Fertility rate.** The fertility rate i.e. the number of babies a woman gives births to, implies an interesting future trend in these two countries. Considering the fact that a fertility rate of 2.1 (Stein R., 2007) is needed to sustain the current population size in the future, it is predicted that India will become the most populous country in the not too distant future. A recent UN report predicts it will be in 2028 (BBC, 2013). The authors think this growth may present a strategic juncture point for consumer product/service industries, especially industries catering to the young. At the current Chinese rate 1.55, far below the self-replacement level, its population will shrink gradually and may cause labor shortages, especially young workers.

**Age demographics.** The age demographic data for people age 24 and under shows India has the highest percentage of young people (46.6%) compared to that of China and US. It is interesting to note that the China's rate (31.8%) is even less than that of US 33.1%; indicating that China's population is aging.

**Economy.** There are two important economic data to consider when a company makes a business decision in a country: GDP (Gross Domestic Product) and GDP Per Capita (GDP divided by population). GDP, commonly used as an indicator of the economic power and health of a country, is the monetary value of all the finished goods and services produced within a country's borders in a year and it includes all of private and public consumption, government outlays, investments and exports less imports that occur within a country.

**Table 2. Economy Comparison: China vs. India**

	USA	China	India
GDP (US\$ Trillion) (CIA 2014 est.)	\$17.4	\$10.3	\$2.0
GDP PC (WB 2013)	\$53,042	\$6,807	\$1,498
GDP PC (PPP) (CIA 2014 est.)	\$54,800	\$12,900	\$5,800
Number of Billionaires (D.K. & K.L. 2015)	536 (# 1)	213 (# 2)	90 (# 4)
GDP Growth Rate 2015 (A. S. 2015)	3.1%	6.8%	7.5%
FDI net inflows(Billion) (WB 2013)	US\$295	US\$348	US\$28
Export (Billion) (CIA 2014 est.)	\$1,610	\$2,252	\$342.5
Import (Billion) (CIA 2013 est.)	\$2,295	\$1,949	\$482.3

**GDP and GDP per Capita.** China recently became the second largest economy in the world right after the US and its GDP (on an exchange rate basis) is now over 10 trillion dollars, while India recently passed the 2 trillion dollar mark this year. Notably, India's economy is merely 20% of China's. To understand economic productivity and consumption level at a personal level, the GDP per Capita figures are investigated. Both countries' GDP PCs (exchange rate basis) are still far behind those of developed countries; they are even lower than the poverty line of US at US\$ 11,770 (US Federal Poverty Guidelines, 2015). China's and India's GDP PCs (exchange rate basis) are merely 13% and 3% of those of US respectively. Even after being adjusted for living cost (purchasing power parity), they are merely 19% and 8% of the U.S. respectively. China's per capita (GDP PC) is 4-5 times bigger than that of India. It would appear that different business strategies should be formulated to conduct business in each of these two countries as these differences will lead to different patterns of consumption and consumer behavior. Interestingly, China and India are both ranked very high in terms of the number of billionaires. Comparing this data with the GDP per Capita figures there exists a serious level of income disparity between the rich and poor in these two countries.

**GDP growth rate.** China has been recognized as the fastest growing economy (in terms of GDP) of the world over the last decade or so, but this is about to change. Based on recent IMF projections, India will outgrow its China this year in 2015 (A. S., 2015). It is projected that India's growth rate will increase to 7.5% and China's growth rate will slip to 6.8% in 2015. Lower oil prices and the weak US dollar have propelled the recent growth of the Indian economy. India has therefore become attractive for emerging market investors.

**FDI and International Trade.** Foreign direct investment (FDI) data is a good indicator of a country's financial health and also how attractive a country is for foreign investment. As shown in Table 2, the FDI in India is less than 10 % of FDI in China; 348 billion (USD) worth of FDI inflows were made to China while 29 billion dollars of FDI inflows went to India in 2013. What may make the India's financial situation more difficult is its trade balance. In 2013, China produced 270 billion dollars' worth of excess foreign reserves through trade. On the contrary, India incurred a shortage of 160 billion dollars of foreign currency. This leads to two markedly different financial situations of the two countries: China as a creditor and India as a debtor. India's burden of paying interest

on debts will be not lessened in the near future and, unlike China, India may carry a major financial burden and inflationary risks due to the foreign reserve shortage.

**Business Environments.** For this study, amongst many areas, average employee wage, difficulty of starting a business, corruption, pollution, and Internet penetration and average speed data are examined to understand the business environments in China and India.

**Table 3. Business Environment Comparison: China and India**

	USA	China	India
Employee Earning Monthly (ILO 2012)	\$3,518.60	\$629.36 (3897.4 CNY)	\$163.43 (10291.3 INR)
Start A Business Ranking (Days to Register) (WB 2014)	46th (5.6d) /189 countries	128 <sup>th</sup> (31.4d) /189 countries	158 <sup>th</sup> (28.4d) /189 countries
Transparency Rate (Transparency.org 2014)	17th /175 countries	100th /175 countries	85th /175 countries
Pollution Status (top 20 most polluted cities by Numbeo.com 2015)	0 cities	4 cities	5 cities
Internet Penetration (Internetlivestats 2014)	86.75%	46.03%	19.19%
Internet Speed (mbps: megabits per second) (Economiza 2014)	11.5 mbps Rank 11	3.8 mbps Rank 40	2.0 mbps Rank 51

**Average wage.** As shown in Table 3, the wage difference between these two countries is significant. For this study, the average employee monthly wage figures shown in the Global Wage Report in 2012 are referenced. It is noteworthy that, after being recalculated in US dollars (2014 exchange rate), the nominal average employee monthly wages are very low compared to developed countries. US monthly wage is US\$ 3,500 a month, whereas in China it is US\$ 629 a month and India only US\$ 163 a month, i.e. 1/7<sup>th</sup> and 1/20<sup>th</sup> of the US respectively, and the wage in China is almost 4 times that in India. Although the labor cost does not take the quality of labor into account, and there are other important factors to consider such as infrastructure constraints, the potential financial benefits from the cheap labor cost in India is currently so great and obvious that many companies (especially in labor intensive industries) move their facilities and business centers to India. Considering the potential labor shortage concerns in China, the transition of labor intensive industries to India may accelerate in the next decade.

**Starting a business.** The Start a Business index, published in the World Bank, provides useful information to measure how easy or difficult it is to start/conduct a business in a country. For this paper, we use data from 2014. China ranked 128<sup>th</sup> and India ranked 158<sup>th</sup> out of 189 countries in this category. These data indicate how difficult and time consuming the process is to initiate and operate a business in these two countries. China is not new in this category due to its political structure as a socialistic, one-party controlled country, but it is very surprising to note that India is ranked even lower than China, and in fact, is rated as one of the lowest in the global ranking. A further study is needed to find a cause.



**Corruption.** To compare the corruption levels of both countries, we used Transparency International’s CPI (Corruption Perceptions Index) 2014 figures (the index measures people’s perceptions of how corrupt their public sector is.). As Table 3 shows, both China and India ranked low in their transparency ratings; China 100<sup>th</sup> and India 85<sup>th</sup> out of 175 countries. This presents a huge operational challenge to foreign companies and investors. For example, US companies are subject to the anti-corruption Foreign Corrupt Practices Act (FCPA), which makes it illegal for companies and their supervisors to influence anyone with any personal payments or rewards in overseas business operations. Unfortunately corruption in China and India is rampant throughout their societies and enrooted/embedded in their culture so this problem cannot be easily overcome soon. It is thus very important to find an ethical, reliable local partner to initiate/conduct business in these two countries.

**Pollution.** To understand the pollution situations of these two countries, Numbeo.com data (world’s largest database of user contributed data about cities and countries worldwide) from April 2015 is referenced (Numbeo, 2015). The pollution index is an estimation of the overall pollution in the city. The biggest weight is given to air pollution, then to water pollution/accessibility, the two main pollution factors. Lesser weight is given to other pollution types. The results clearly indicate that China and India are among the most polluted countries in the world. 4 Chinese cities (3 cities in the top 10) and 5 Indian cities are included in the top 20 most polluted city list. In the 2014 WHO (World Health Organization) survey, which included 1,600 cities, Delhi, India has the highest level of the airborne particulate matter, called PM 2.5, considered most harmful to health and half of the top 20 cities in the world with the highest levels of PM 2.5 are located in India (Park, M., 2014). It is worrisome to note about three-fourths of the top 20 most polluted cities now lie in Asia, especially in China and India and the countries sit in between the two. These two countries continue to compete to attract more foreign investments and factories without adopting/practicing an effective anti-pollution strategy. Furthermore, the pollution situation continues to get worse in this region. Doubtlessly, the anti-pollution industry is booming with promising future in these two countries.

**Internet Infrastructure.** The Internet penetration and speed of a country is a useful indicator to understand the status of technology development and infrastructure. Both China and India’s Internet penetration rates (46% and 19% respectively) and its average speeds (3.8 mbps and 2.0 mbps respectively) are far behind those of the United States’ penetration rate 86.75% and speed (11.5 mbps). These data clearly show these two countries are in urgent need of improving their digital networking and computing infrastructure.

**Culture and living conditions.** For this study, education/literacy rate, religion, main language, life span, sanitation, and happiness index data are examined to explore the similarities and differences of cultures and living conditions in China and India.

**Table 4. Culture and Living: China and India**

	USA	China	India
PISA test 2009 (Lehmann, 2015)	-	1 <sup>st</sup> (out of 74 countries)	73 <sup>rd</sup> (out of 74 countries)
Literacy (CIA)	99% (2003 est.)	95.1% (2010 est.)	74% (2011 est.)
Religion (% Unaffiliated) Censusindia & Pewforum	15%	52.2%	0%

Largest Religion	Christian (78%)	Folk Religion (21.9%)	Hindu (80.5%)
Main Language (Census & Jacob S.)	English	Mandarin	22 official languages/ 2,000 dialects
Life Span (CIA 2014 est.)	79.56	75.15	67.8
Sanitation (CIA 2012 est.)	100%	65%	36%
Happiness Index (NEF 2012)	37.3	44.7	50.9

**Education and Literacy.** It is in this area that the most glaring difference exists between India and China. In the 2009 Program for International Student Assessment (PISA) test for fifteen year olds in reading, math and science from seventy-four countries, India ranked seventy-third (second to last), whereas China was first (Lehmann, 2015). The Chinese results were from Shanghai, which isn't representative of all of China, but the difference is stark. Looking toward the future, where jobs will be far more dependent on a higher level of education, the future looks bleak for India. Companies looking for highly trained workers will have to do undertake much of the responsibility for education themselves. The prospect of a rapidly rising population qualified for mostly menial jobs is quite alarming in terms of the probability of social unrest.

The literacy rate of these two countries affirms similar findings. Compared to China's (95.1%), the India's literacy rate is merely 74%. In another words, 26% of Indians are illiterate; not able to read and write. This can pose a challenging concern in marketing and also hiring and training new employees for a local operation for a foreign company.

**Religion.** There are significant differences in religions between two countries. While over 50% of Chinese are listed as unaffiliated (officially regarded as atheists' country), almost all Indians are affiliated (0% unaffiliated) with a religion, especially Hinduism (80.5%) and Muslim (13.4%). Religious practices and beliefs need to be properly understood and accommodated in order to conduct business effectively in India.

**Language.** It is interesting to note the number of official languages in India compared to China. While China has one official language, Mandarin, for the country, there are 22 official languages and 2,000 dialects in India. It clearly shows the diversity of cultures, society, and living environments in India. This presents an enormous business challenge to foreign firms due to the difficulty in communicating with locals and developing an effective marketing strategy in India.

**Life expectancy and sanitary conditions.** Life expectancy and sanitation data (Table 5) help to understand the overall quality of life and living conditions of each country as these are important inputs to decisions related to operating a business and/or living in a foreign country. Life expectancy at birth data shows the mortality at all ages. It is noteworthy that China's and India's average life span is 4.5 years and almost 12 years shorter than that of the US respectively. China is rated 101<sup>st</sup> and India rated 164<sup>th</sup> out of 224 countries in the CIA World Factbook 2014. The gap, about 7.5 years, between China and India is significant. Although further investigation is needed, sanitary conditions, medical infrastructure, and environmental conditions are known to be the major contributing factors for a shorter life span.

It is troubling to note the sanitary conditions (65% and 36% respectively) of these two countries are far behind that of US (100%). This sanitation data refers to the percentage of the population using improved sanitation facilities. The improved sanitation facilities include flush/pour flush (to piped sewer system, septic tank, and pit latrine), ventilated improved pit (VIP) latrine, pit latrine with slab, and composting toilet. There are two sides of a coin with these social concerns. The problem areas in these countries present enormous business opportunities especially to those industries such as anti-pollution, medicine, construction, etc. and at the same time this can be a serious challenge for the companies that send expatriates to operate a local business and live in these countries.

**Happiness Index.** Ironically, the HPI (Happy Planet Index) data shows very interesting results; Indians seem to be the happiest people among three countries; happier than Chinese and Americans and Chinese are happier than Americans. Based on its global rankings, India ranked 30<sup>th</sup>, China 62<sup>nd</sup>, and the US 105<sup>th</sup>.

### III. Conclusion

The two Asian giants, China and India, present unique problems for international companies seeking to do business there. They do possess the same characteristics of huge populations, vast numbers of very poor people, many of them working in agriculture and living in rural areas; corruption; poor infrastructure; environmental pollution; and poor living conditions. Of course, there are considerable differences between them--in culture, religion, languages, political structure, diversity, demographics, and education.

Companies doing business in these countries find they need to modify their marketing techniques to be successful. Doing business is far more difficult owing to government red tape and the absence of logistical and financial support systems common in developed countries. Although it is easier to focus on the rapidly burgeoning middle class in both countries that lives in mostly urban areas, the real challenge is in reaching the vast hinterland, where the poorest people live. These people are not reachable by traditional marketing methods, nor are their villages easily reached by modern transportation. Furthermore, they are too poor to afford western quantities of goods, so companies need to downsize their products to sell very small portions of goods like soap, toothpaste, food, lotion, etc. There is almost no refrigeration, so goods have to be redesigned to survive without it. Payment is usually in cash, and not through credit cards. It is true, however, that large sections of both countries have leapfrogged a whole generation of communications technology, i.e. wired telecommunications. Poor people in huge numbers are using mobile computing via cell phones to communicate and conduct business. Phones have begun to replace credit cards and cash as a payment mechanism in many areas.

One of the world's greatest business stories is unfolding right now.

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# The alignment effect of entrepreneurial orientation and marketing orientation on performance in new venture

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## Abstract

Previous studies have showed the relevance of corporate entrepreneurial orientation (EO), marketing orientation (MO) and business performance. However, there is a considerable variation in the magnitude of relationship between EO and business performance or even unable to find a significant relationship between EO and performance. Our central argument is that the benefits of EO depend on the marketing orientation that a firm adopted, and a firm's performance is greatest when aligning EO and MO. Purposes of this study are to explore the influence of entrepreneurial-marketing alignments on Small Business and Medium Enterprises' performance, and also to explore the determined variables which are most conducive to the alignment effect on SMEs growth in the context of Taiwan economy. Understanding this relationship is essential in guiding entrepreneurial behavior to improve SMEs' performance.

**Keywords :** Entrepreneurial Orientation, Marketing Orientation, Opportunity Recognition

## I. Introduction

The concept of entrepreneurial orientation (EO) is relevant to entrepreneurship, most scholar regard EO as a phenomenon associated with corporate entrepreneurship (Covin & Miller, 2013). The concept of EO proposed by Covin and Slevin (1989) include risk taking, proactiveness, and innovative behaviors, which captures how managers engage business activities and structural arrangements to support innovative ideas. With regard to EO, much of researchers have repeatedly emphasized the importance of developing high EO to promote new innovations and facilitate decisions that encourage proactive initiatives (Rauch et al., 2009; Covin & Slevin, 1989). From previous studies (Rauch et al., 2009; Li, Zhao, Tan & Liu, 2008), firms can benefit from adopting an EO.

However, counterarguments have been put forward that some studies (Dimitratos, Lioukas & Carter, 2004)

found low correlations between EO and performance. Thus, there is a considerable variation in the magnitude of relationship between EO and performance across previous studies (Rauch et al., 2009). In contrast to most EO studies, Wiklund and Shepherd (2011) found that EO also has a positive relationship with firm failure. Is the variation is enough to do empirical examination of moderators of the EO on performance relationship? This raises our study motivation to explain why the inconsistency held in the previous studies and why some studies have failed showing performance benefits for EO. It can make important contribution for entrepreneurship literatures to investigate the relationship between EO and performance.

Our central argument is that the benefits of EO depend on the marketing orientation (MO) that a firm adopted. An important condition for entrepreneurship is that it requires commercialized their product/service through a sound business model. Thus, this study argued that in a strong EO firms, the capability of understanding market-driven and market-driving behavior (Schindehutte, Morris & Kocak, 2008) plays a critical role in determining transitions innovative product or service into performances over time. Thus MO is very important to promote firm's entrepreneurship. In such cases, when a business's EO and MO align together, the complementary traits can synergistically help a firm achieve performance and success.

Much research has been examined the relationship between market orientation to firm's performance and concluded that market orientation has an influence on firm's performance (Boso, Story & Cadogan, 2013; Li, et al., 2008). The effects of relationship between MO and EO on firm performance call for more attention. However, the strategic orientation literature is not yet clear whether it is appropriate for firms to invest in EO and MO and to examine whether entrepreneurial firms accrue performance benefits by simultaneously aligning high levels of both EO and MO. Little research has done to test the alignment effect of EO and MO on business performance. Li, et al. (2008) found that EO positively moderated the relationship between MO and performance. It contradicts to our argument that EO will influence the MO, and the performance is better when EO and MO are aligning. Boso, et al. (2013) indicated that aligning high levels of EO and MO improves business performance, but their study didn't explore in detail the nature of the relationship between EO and MO and organizational performance. Understanding this relationship is essential in guiding entrepreneurial behavior to improve firms' performance.

To overcome the limited research on the alignment effect of EO and MO on business performance, a further study is needed to investigate more fully about the alignment effect to fill the gap in the literature regarding the influence of alignment between EO and MO on firms' performance. Hoping this study can contribute to the practitioners to develop the entrepreneurial -marketing focus and enhance the opportunity of success. The purposes of study are (1) to identify the various types of EO and MO in Taiwan's firms, (2) to conceptualize the appropriate alignment between EO and MO as complementary traits that may synergistically help a firm achieving success, and (3) to compare the performance between orientation alignment firms and nonalignment firms.

## **II. Literature Discussion and Hypothesis**

Rauch et al., (2009) and Li, et al. (2008) indicated that firms have EO often result in high performance, but some studies (Dimitratos, et al., 2004) unable to find a significant relationship between EO and performance.

This study argued that in a strong EO firms, the capability of understanding marketing orientation behavior (Schindehutte, et al., 2008) plays a critical role in determining the benefits of EO. Thus MO is very important to promote firm's entrepreneurship. Much research has been examined the relationship between market orientation to firm's performance and concluded that market orientation has an influence on firm's performance (Boso, et al., 2013; Li, et al., 2008) . However, Hult and Ketchen (2001) suggest that the potential value of market orientation should be considered together with other important firm capabilities, such as entrepreneurship. Therefore, this study proposes that there is an association between entrepreneurial orientation and marketing orientation.

H1: A firm's market orientation does vary according its entrepreneurial orientation.

Matsuno, Mentzer and Özsoy (2002) also find that entrepreneurship in combination with market orientation positively affects firm performance. MO is important to promote firm's entrepreneurship, because entrepreneurship requires marketing behaviors to commercialize its innovation (Schindehutte, et al., 2008). In such cases, when a business's EO and MO alignment together, the complementary traits can synergistically help a firm achieve performance and success. Bergeron, Raymond and Rivard (2004) indicated that strategic alignment or "fit" is a notion that is deemed crucial in understanding how organizations can translate their deployment of information technology (IT) into actual increases in performance. In this study, the definition of strategic alignment is the process of bringing the actions of an organization's MO into line with the organization's EO. Firms with ability of performing strategic alignment can achieve better performance. This study assumes that the benefits of EO depend on the marketing orientation that a firm adopted, and a firm's performance is greatest when aligning EO and MO. Therefore, we hypothesize the following:

H2: Strategic alignment has effect on firm's performance.

González-Benito, González-Benito and Muñoz-Gallego (2014) showed that environmental dynamism moderates the relationship between market orientation and business performance. The possible moderators between MO and performance include market turbulence, competitive intensity, technological turbulence, and market growth (Kohli & Jaworski1990). This study adopted technological turbulence as a moderator because it is important for business survival and growth under an environment of rapid change (Zhou, Yim & Tse, 2005). In turn, fast technological advances significantly shorten the life cycle of existing products, erode the competitive advantage of firm had built (Zhou, et al., 2005). Technological turbulence posits inhibiting effect on the strategic alignment-performance relationship, such that the higher the technological dynamism, the greater the uncertainty of the firm's performance will be. Thus, this study assumes that the relationship between the strategic alignment and performance is moderated by the level of technological turbulence.

H3: Technological turbulence mediates the relationships between strategic alignment and performance.

In the field of entrepreneurship, opportunity recognition has been regarded as a key aspect of the entrepreneurial process. Shane and Nicolaou (2014) found that people with creative personalities are more likely than others to both identify new business opportunities and to start businesses. In return, firms with clear strategic orientation are also better at business opportunity finding. Therefore, firms with ability of performing strategic alignment can achieve better performance (Matsuno, et al., 2002), also encourage employees behavior under the guideline of EO and MO to find novel solutions and sales challenges to adapt the needs of target markets.

H4: Strategic alignment has effect on firm's opportunity recognition.

Technological orientation refers to a firm's openness to new ideas and its propensity to adopt new technologies to create new technical solutions by exploiting their existing knowledge and exploring new knowledge to address customer needs under dynamic environment (Tsou, Chen & Liao, 2014). Moreover, technological turbulence refers to the rate of technological advances within an industry (Zhou, et al., 2005). In this case of technology undergoing rapid change, firms must encourage more breakthroughs and new opportunities to adapt innovation capabilities to the needs of target markets. Therefore, changing technological environment requires firm's efforts to recognize new opportunities. Therefore, we hypothesize the following:

H5: Technology turbulence has a positive effect on firm's opportunity recognition.

### **III. Method**

#### **Samples and Data Collection**

The study used a convenience sample to contact, by mail, graduated students in the EMBA program in Business Administration of Tamkang University to elicit their company's participation in our study. Six entrepreneurs studied in the EMBA program and received a course of strategy management, helped finalizing questionnaire. In February 2015, all 285 firms were contacted by telephone to confirm participation in the study. Subsequently, the entrepreneurs or the CEOs were approached with a questionnaire by email. Complete responses were received from 134 firms (47.02%) by the end of March 2015.

#### **Questionnaire and Measurement**

EO refers to firms' proactive to explore new market opportunities; this study adopted the measure of entrepreneurial orientation of Zhou, et al. (2005). MO is defined as the implementation of the marketing concept in firms' target markets; The scale is based on the work of Boso, et al. (2013), which conceptualizes market-oriented activities with market intelligence generation and market intelligence responsiveness. Technological turbulence based on Zhou, et al. (2005) work, referring to the rate of technological advances within an industry. The scale of opportunity recognition adopted the work of Hsieh and Liu (2009). Cardon, et al. (2009) has identified sales performance and profitability as major outcomes of EO and MO. Thus, this research



focuses on sales performance and profitability measures as key dependent variables. Seven response categories were used to measure question items that ranged from “strongly agree” to “strongly disagree”.

#### IV. Results

##### Measurement Tests

Satisfactory model fits are indicated by the value less than 3 of  $\chi^2/df$  ( $\chi^2 = 289.27$ ,  $df = 156$ ,  $\chi^2/df = 1.85$ ), RMSEA = 0.07, GFI = 0.84, AGFI = 0.79, CFI = 0.96 and NFI, IFI greater than 0.92, indicating an acceptable of good mode fit. All indicator factor loadings have a significant t-value ranging from 0.81 to 0.97 on their respective constructs. The composite reliability values have a range from 0.92 to 0.96, whereas the whole range of average variance extracted is from 0.75 to 0.88 for each latent construct. The result is shown in Table 1. Table2 shows all constructs have sufficient discriminant validity since the square root of each latent construct’s AVE (values on the diagonal) is larger than the correlation of the specific construct with any other constructs in our research model.

Table 1: The result of the CFA analysis

Constructs	Item	loading	Item reliability	C.R	Mean (std)	AVE
Marketing orientation	1	0.94*	0.93	0.96	4.17 (1.99)	0.87
	2	0.96*	0.94			
	3	0.95*	0.95			
	4	0.89*	0.86			
Entrepreneurial orientation	1	0.97*	0.93	0.96	4.17 (1.85)	0.86
	2	0.95*	0.93			
	3	0.91*	0.90			
	4	0.90*	0.89			
Technological turbulence	1	0.93*	0.86	0.92	4.05 (1.61)	0.75
	2	0.84*	0.79			
	3	0.85*	0.89			
	4	0.85*	0.87			
Opportunity recognition	1	0.93*	0.89	0.96	4.05 (1.63)	0.88
	2	0.86*	0.94			
	3	0.93*	0.91			
	4	0.94*	0.90			
Business Performance	1	0.81*	0.80	0.95	4.22 (1.59)	0.81
	2	0.95*	0.90			
	3	0.95*	0.90			
	4	0.91*	0.88			

Table 2: Construct AVE analysis and inter construct correlations

	Opportunity recognition	Marketing orientation	Business Performance	Technological turbulence	Entrepreneurial orientation
Opportunity recognition	0.94				
Marketing orientation	0.85	0.94			
Business Performance	0.80	0.79	0.90		

<b>Technological turbulence</b>	0.85	0.82	0.71	0.87	
<b>Entrepreneurial orientation</b>	0.92	0.92	0.80	0.81	0.93

### MO and EO classification

Using a mean split classified respondents as relatively high or low on each respective constructs. An analysis of variance showed that respondents classified as high MO ( $X = 5.81$ ) had significantly higher scores than did those classified as low MO ( $X = 2.15$ ;  $F(1, 132) = 655, p < 0.01$ ). For EO, participants assorted as high EO ( $X = 5.68$ ) had significantly higher scores than did those classified as low EO ( $X = 2.36$ ;  $F(1, 132) = 536, p < 0.01$ ). Cross-tabulation table comparing EO with MO, the results of Chi-square statistic (Pearson Chi-square value = 80.30,  $p < 0.01$ ) revealed that there is a significant relationship between the two variables. Hence, this study supports H1. This study identifies three types of strategies for firms to conduct their entrepreneurial behaviors. Firms with low EO and low MO were classified as passive entrepreneurship, whereas firms with high EO and high MO were classified as proactive entrepreneurship. Those with low EO and high MO or with high EO and low MO were assorted as unfit entrepreneurship. Within this data, it reported 39.6% ( $n = 53$ ) of respondents as passive, 49.3% ( $n = 66$ ) as proactive and 11.2% ( $n = 15$ ) as unfit strategy.

### ANOVA

A mean split was performed to classify respondents as relatively high or low on technological turbulence. Table 3 show a main effect for the type of strategic orientations ( $F(2, 128) = 13.65, p < 0.001$ ) and an interaction between strategic orientations and technological turbulence ( $F(2, 128) = 8.08, p < 0.001$ ); no main effect emerged for technological turbulence. There was a significant difference between those using different types of strategy. Firms with proactive strategy received more performance than those with passive strategy ( $M_{proactive} = 5.31, M_{passive} = 2.83, M_{proactive} - M_{passive} = 2.47, p < 0.001$ ) and unfit strategy ( $M_{proactive} = 5.31, M_{unfit} = 4.35, M_{proactive} - M_{unfit} = 0.96, p < 0.005$ ), whereas firms with passive strategy received less performance than those with unfit strategy ( $M_{unfit} = 4.35, M_{passive} = 2.83, M_{unfit} - M_{passive} = 1.52, p < 0.001$ ). This provides evidence supporting H2.

The relationships between SO and performance are moderated by the level of technological turbulence. When firms in environment of rapid technology change, firm with proactive strategy achieves the best performance; passive strategy is second and last place is unfit strategy ( $M_{proactive} = 5.37, M_{unfit} = 4.25, M_{passive} = 3.87$ ). However, when environment is low level of technological turbulence, firm with proactive and unfit strategies get more performance than those with passive strategy ( $M_{proactive} = 4.97, M_{unfit} = 5.40, M_{passive} = 2.72$ ). This interaction supports H3.

Table 3: ANOVA Results for firm's performance

Source	<i>df</i>	<i>MSE</i>	<i>F</i>	<i>p</i>
Intercept	1	1023.051	953.497	.000***

Strategic Orientation (SO)	2	14.651	13.655	.000***
Technological Turbulence(TB)	1	.175	.163	.687
SO x TB	2	8.667	8.078	.000***
Error	128	Adjusted R Squared = .575		

Table 4 revealed that the type of strategic orientations and technological turbulence had main effect, and there is no interaction between SO and TB. Subsequent analyses indicate that opportunity recognition of firms did differ among the three strategies ( $F(2, 128) = 27.59, p < 0.001$ ). Firms with proactive strategy performed better at finding business opportunity than those with passive strategy ( $M_{proactive} = 4.98, M_{passive} = 3.02, M_{proactive} - M_{passive} = 2.83, p < 0.001$ ) and unfit strategy ( $M_{proactive} = 4.98, M_{unfit} = 3.73, M_{proactive} - M_{unfit} = 1.50, p < 0.005$ ), whereas firms with unfit strategy had significantly higher scores than those with passive strategy ( $M_{unfit} = 3.73, M_{passive} = 3.02, M_{unfit} - M_{passive} = 1.33, p < 0.001$ ). Moreover, across the level of technological turbulence, firms in high level of turbulence performed better than those in low level of turbulence at finding business opportunity ( $M_{high} = 4.38, M_{low} = 3.45, p < 0.001$ ). This provides evidence supporting H4 and H5.

Table 4: ANOVA results for opportunity recognition

Source	<i>df</i>	<i>MSE</i>	<i>F</i>	<i>p</i>
Intercept	1	800.969	1001.07	.000***
Strategic Orientation (SO)	2	22.075	27.590	.000***
Technological Turbulence(TB)	1	11.414	14.265	.000***
SO x TB	2	.377	.471	.625
Error	128	Adjusted R Squared = .700		

## V. Conclusion

From a research perspective, this study aim to explore the relationships between EO and MO and how it influence business performance. The results showed that a firm's market orientation does vary according its entrepreneurial orientation. Our data support the evidence that the different type of strategic alignment had an impact on a firm's performance, and technological turbulence mediates the relationships between strategic alignment and performance. These results have significant implications for firm strategies to facilitate business innovations and achieve competitive advantages. Especially, the relationship between MO and EO and their influence on firm performance calls for more attention for firms adapting to rapidly changing business environment. From a practical perspective, this study try to identify the orientation fit between EO and MO, providing entrepreneur a better understanding of this relationship between strategic orientations. As a result, this study may help firms' performance and outperform their competitors, especially in the context of Taiwan's transitional economy.

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# Allocating Coalition Payoffs under Diminishing Marginal Returns: Analytic Nucleolus Solutions for N-Player Cooperative Games

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## Abstract

Cooperative game theory contributes to the fair allocation of the payoff that is jointly made by players in a coalition. Since the 1940s, many researchers in game theory have proposed a number of solution concepts to solve the problem of how to allocate coalition payoffs in a fair manner. In this project, we focus on the important solution concept nucleolus (Schmeidler, 1969), which may not be easy to compute because we usually have to solve a series of linear programming problems or by solving a very large-scale linear programming problem.

In this project, we derive analytic nucleolus solutions for  $n$ -player cooperative games, which can be easily used to allocate the whole payoff of the grand coalition among  $n$  players in a fair manner for any problem with diminishing marginal returns (i.e., a decrease in the marginal output as a result of an incremental increase in an input). In practice, lots of problems exhibit the phenomenon of diminishing marginal returns, which is also called “law of diminishing returns,” “principle of diminishing marginal productivity,” or others. Many economics books have provided details about this phenomenon; see, e.g., Samuelson and Nordhaus (2009). Some recent experimental evidences (e.g., Barcelo and Capraro 2013 and Nosenzo, Quercia, and Sefton 2014) also show the widespread existence of diminishing returns in reality. Moreover, in the past 15 years, a number of researchers have examined the cooperative games under diminishing marginal returns. Such games include the matroid profit games, which represent a typical (and well-known) cooperative game class, as mentioned by Schulz and Uhanb (2013) who considered the core of cooperative games for a similar case. Bilbo et al. (2001, 2002) computed the Shapley value for cooperative games on matroids in the static and dynamic settings. Different from Bilbo et al. (2001, 2002), Schulz and Uhanb (2013), and other relevant publications, we propose an easy-to-implement algebraic method to compute the nucleolus solution analytically (i.e., in closed-form) for any cooperative game in characteristic function form under diminishing marginal returns.

In this project, we first find the sufficient and necessary condition under which the core of the game is non-empty, and derive a closed-form nucleolus solution to characterize a fair allocation scheme that can assure stability of the grand coalition when the core is non-empty.

**Keywords:** Cooperative game theory, diminishing marginal returns, nucleolus

# Modelling, Analysis and Projections: A Case Study on Nursing Workforce Demand in a Local Nursing Home

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## Abstract

The percentage of the elderly population in almost every country is growing at a much faster rate than any other age groups due to declining fertility rates and longer life expectancy. The demand for healthcare services is increasing dramatically, and the global market for elderly healthcare services is also expanding.

The ageing population is becoming a major concern in Hong Kong. The ageing trend together with the increasing demand for elderly healthcare services creates opportunities for the growth of private healthcare services providers; however, threatens the public healthcare system. Given the continuous, huge demand of nursing needs, frontline staff of the healthcare system have heavy workloads and are under heavy pressure, which result in high nursing staff turnover and continual manpower shortage. Furthermore, the newly employed nurses are insufficient to fill the existing vacancies, and cannot meet the projected increasing healthcare needs associated with the ageing population.

With the governmental policy of promoting ‘ageing in place as the core, institutional care as back-up’, the number of local nursing homes as well as local subsidised and non-subsidised residential care places for the elderly is increasing substantially. The growth in the demand of nursing home places, compounded by the increasing complexities of illnesses and varieties of procedures, poses a heavy workload to nursing staff of nursing home. As a result, nursing homes are experiencing manpower shortage and overloading of the nursing staff.

Although the ageing trend has drawn academic, commercial and political interests for better resources allocation in nursing home, only a few studies have been conducted on personnel planning in nursing homes. Among these studies, researchers seldom formulated the nursing workforce planning problem or established a model for practical usage. Furthermore, there is a lack of a feasible and flexible approach for nursing workforce demand projections in nursing homes.

In response to the problems that nursing home managers are currently facing during workforce demand projections and the potentially expanding market, this paper focuses on increasing services capacity of local nursing homes by proposing a nursing workforce demand projection modelling. Emerging and smart technologies, including Internet of Things (IoT) and Radio Frequency Identification (RFID), are utilized for data acquisition and instant data transmission for model building and analysis. In this paper, related literature was reviewed, a nursing workforce demand projection modeling was presented, issues of concern were considered, and the problem was formulated as an optimization problem. This paper illustrates how to solve the simplified model by Excel Solver in order to show the feasibility, the proposed model will be solved by other algorithms, such as enhanced optimization techniques and heuristics, in the near future.

The idea of integrating and modelling workforce demand projections and enhancing the flexibility of nursing staff employment in nursing homes is original. Moreover, the model presented attempts to ensure an equal distribution of workload among available nurses, and it incorporates a joint requirement of multiple types of nurse in different tasks. The proposed model is applicable for nursing homes with various types of work shift arrangements.

**Keywords:** personnel planning, nursing home, staffing optimization, workforce demand projection

## I. Introduction

As reported by the World Health Organization (2012), the percentage of the elderly population, aged 65 or above, in almost every country is growing at a much faster rate than any other age group due to declining fertility rates, advances in healthcare technologies and longer life expectancy. Healthcare is an indispensable component of human welfare in our modern society (Griffiths et al., 2012). The demand for healthcare services is increasing dramatically, and the global market for elderly healthcare services is also expanding (Knickman & Snell, 2002).

The ageing population is becoming a major concern in Hong Kong. It is projected by the Department of Community Medicine and School of Public Health (2008) that the public health expenditure of Hong Kong will increase from HK\$10,400 in 2012 to HK\$22,300 billion in 2033, and the private health expenditure will increase from HK\$7,900 in 2012 to HK\$15,300 billion in 2033 (Figure 1). Given the ageing trend of population, there is also an increasing and huge demand for residential care places in Hong Kong (Social Welfare Department, 2011) as shown in Figure 2.

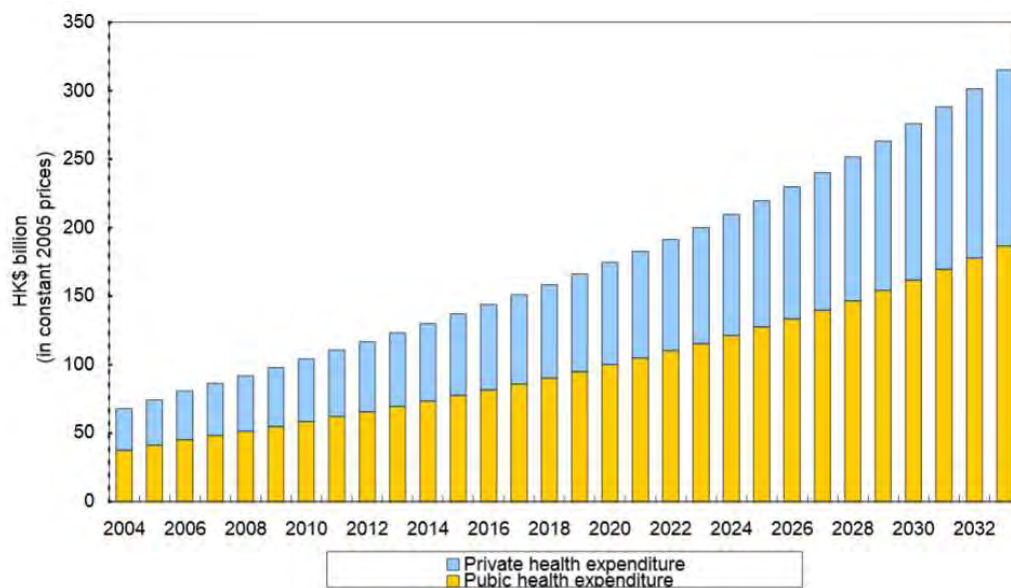


Figure 1. Projected Public and Private Expenditures for Year 2004-2033

Source: Food and Health Bureau, 2008a



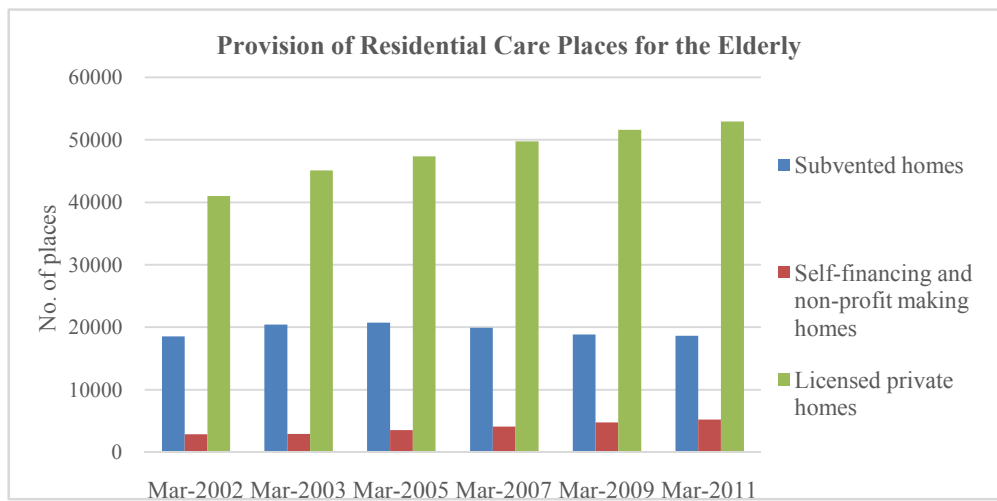


Figure 2. The Increasing Provision of Residential Care Places for the Elderly in Hong Kong

The ageing trend together with the increasing demand for elderly residential care services creates opportunities for the growth of licensed private home (Knickman & Snell, 2002); however, threatens the public healthcare system that its healthcare and social welfare expenditures are growing at a much faster rate than economic growth (Food and Health Bureau, 2008b). Given the continual growth in the number of elderly and the demand for elderly residential care services, compounded by the increasing complexities of illnesses and varieties of procedures, poses a heavy workload on frontline staff and capacity of local residential care homes for the elderly. Continual manpower shortages and high staff turnover, especially among nurses, are resulted (Hospital Authority, 2014). These problems mainly arise from ineffective personnel planning.

In the face of the challenges brought about by an ageing population and an increasing demand for better and more cost-effective residential care services for the frail elderly, the government and business sector strive for increasing the provision of residential care places for the elderly (Social Welfare Department, 2011) and improving the utilization of resources through better personnel planning as one of their core policies. An efficient personnel planning is essential for nursing homes to enhance their service capacity, and to provide quality service for all their residents at lower operational costs and more reasonable staff loads (Petrovic & Berghe, 2012; Todorovic & Petrovic, 2013).

Although the ageing trend has drawn political, commercial and academic interests for better personnel planning in healthcare settings, the nursing home sector is a rather unique part of the healthcare industry that has received little attention in the literature. Existing studies have suggested various factors that might affect workforce planning in nursing homes, such as the staffing levels and the resident case mix, without formulating the problems or establishing a model for practical usage (Bowlis & Lucas, 2012; Ellenbecker, 2004). The idea of integrating workforce planning and flexibility of nursing home staff employment in nursing homes is original, although nurse scheduling in hospitals have been widely performed.

This paper aims to enhance the service capacity of local nursing home by flexibly and practically modelling, analyzing and projecting the nursing workforce demands, while ensuring that the resources are managed in a cost-effective and transparent manner. Additionally, this paper tries to ensure reasonable loads are shared among all the available nurses, and it takes into consideration the joint requirement of multiple nurse types perceived in reality, while the daily scheduling of staff is omitted. Thus, the proposed model is applicable for nursing homes with various types of

work shift arrangements, and is more flexible in making nursing workforce demand projection-related decisions. A case study of a local subvented nursing home is presented to demonstrate the practical usage of the proposed model. In the next section, the literature on issues related to personnel planning in nursing homes will be discussed, and the methodology will be presented in Section 3. The formulation of the proposed nursing workforce demand projection model will be presented in Section 4 while the preliminary work and plans for future work will be presented in Section 5. This paper is concluded in Section 6.

## II. Literature Reviews

In the last few decades, personnel planning problems have been studied widely. Personnel planning is a fundamental part of an organization's strategic and human resources planning processes (Ernst et al., 2004; Gert et al., 2004; Jorn et al., 2013). Under the continuous changes in market conditions, enterprises are forced to adapt the changes. The economic consideration in changing market is getting attention (Ernst et al., 2004; Li & Li, 2000). Personnel resources are the most expensive (Gert et al., 2004) and usually the major direct cost component in a company or in a project (Jorn et al., 2013; Li & Li, 2000). However, human resources are the most flexible factors for most of the industries, such as manufacturing, airlines (Petrovic & Berghe, 2007) and healthcare (Burke & Petrovic, 2004; Ernst et al., 2004). Implementing a new personnel plan can reduce labor cost, which is proved to be very beneficial (Ernst et al., 2004; Li & Li, 2000). Therefore, the optimal personnel planning is an important success factor contributing to long-term competitiveness (Gert et al., 2004). In order to align with the market, it is becoming increasingly important to take the cost-intensive personnel resources into consideration (Ernst et al., 2004; Gert et al., 2004).

Over the years, there have been different studies that look specifically at resources planning and scheduling in hospitals and medical service centers. For example, an outpatient physiotherapy clinic (Bourque, 1980) and automated scheduling in hospitals (Parr & Thompson, 2007; Tordorovic & Petrovic, 2013) and medical centers (Petrovic & Berghe, 2012) are considered. The nursing home sector is a rather unique part of the healthcare industry that has received little attention in the literature. Firstly, residents of nursing homes have very dedicated needs for care, and require very different service profiles that must be dealt with by nursing home providers. Secondly, a resident may require changing service needs as a result of their changing health status. Hence, enough service capacity in terms of manpower has to be available so that each resident can receive continual care once admitted.

Modelling of service demand and personnel planning problem have been conducted in medical centers (Punnakitikashem et al., 2008), home care companies (Mankowska et al., 2014), and for therapist (Bard et al., 2014) and general practitioners (Van Greuningen et al., 2012). However, only a minority of existing studies has formulated the personnel planning problem in nursing homes, and they are at nurse scheduling level (Asgeirsson & Siguroardottir, 2014). Latest studies have suggested various factors, such as the staffing levels and the skill mix, which might affect the personnel planning in nursing homes (Bowblis & Lucas, 2012; Ellenbecker, 2004).

Given that healthcare organizations providing all-day-round nursing and medical cares, the issue of work shift emerges and raises both research and operational interest. Previous research suggested that turnover is associated with shift arrangement (Helmer et al., 1993) while others have examined the potential benefits of work shifts to both residents and staff (Burgio et al., 2004). However, most of the existing studies mainly focus on allocating or assigning only one type of staff to working shifts.

Mixes of nurse can be expressed in terms of the skill mix (Kane et al., 2007). Skill mix is a broadly-used concept

that varies within and across countries. For example, skill mix refers to the mix of registered and unregistered nurses in UK, and “the proportion of different nursing grades, and levels of qualification, expertise and experience” in other countries (Ayre et al., 2007, p. 1). Despite the potential importance of nursing skill mix and the debates in evidence for positive patient outcomes, the existing studies seldom provide practical guidance for managers of healthcare organization to implement skill mix, but focus on identifying and examining the impacts of skill-mixes instead (Flynn & Mckeown, 2009).

To resolve these problems, a practical model that provides a comprehensive overview of nursing workforce planning and fully expresses the impacts of staffing level in nursing homes is required. This study is hence intended to fill the gap by developing a model for nursing workforce demand analysis and projection for nursing home. Various important considerations, including work shift arrangement and skill-mix, as informed by existing literatures will be also taken into consideration by the proposed model.

### III. Problem and Model Formulation

A Mixed-Integer Programming (MIP)-based model has been formulated to model the nursing workforce demand projection problem. The assumptions for the model are:

1. Annual leave and sick leave are not taken into consideration during workforce planning.
2. Hiring and firing of nurse will be effective immediately.
3. Differences in productivity of staff are insignificant and negligible.

The notations and variables used to describe the problem formulated are summarized in Tables 1 and 2, respectively.

**Table 1**

**Model Notations-Parameters**

Notation	Description	Notation	Description
$N_i^c$	Total number of current nurses of category $i$	$N_k$	Total number of type $k$ residents
$T_i^{w,m ax}$	The upper limit of working hours per week for a temporary nurse of category $i$	$T_{kl}$	Service time of the $l^{th}$ healthcare task for type $k$ resident per shift
$S_{ij}$	Monthly salary of the $j^{th}$ nurse of category $i$	$M_l$	Skill mix level for a nurse of category $i$ for the $l^{th}$ healthcare task in year
$R_i^{op}$	Hourly wage of overtime work for nurse of category $i$	$C_i^t$	Hourly wage of a temporary nurse of category $i$
$C_i^h$	Cost of hiring a nurse of category $i$	$X_i^{w,m ax}$	The upper limit of shifts a nurse of category $i$ can undertake every 7 consecutive days
$C_i^f$	Cost of firing a nurse of category $i$	$O_m^{ax}$	The upper limit of the overtime work for a nurse of category $i$ in shift $m$

**Table 2**

**Model Notations-Variables**

Notation	Description	Notation	Description
$N_i^p$	Projected number of regular nurses of category $i$	$R_{jm}^{ot}$	Overtime work for the $j^{th}$ nurse of category $i$ in shift $m$
$N_i^h$	Number of additional nurses to be hired for category $i$	$T_i^t$	Total working hours of temporary nurses of category $i$ (in cycle)
$N_i^f$	Number of existing nurses to be fired from category $i$	$X_{jm}$	1 if the $j^{th}$ nurse of category $i$ is on duty in shift $m$ ; otherwise 0
$N_i^t$	Number of temporary nurses of category $i$	$T_m^t$	Total working hours of temporary nurses of category $i$ in shift $m$

$T_{iw}^t$	Total working hours of temporary nurses of category $i$ in week $w$	$X_{ktm}$	1 if the $l^{\text{th}}$ healthcare task is needed for the type $k$ resident in shift $m$ ; otherwise 0
$N_{iw}^t$	Total number of temporary nurses of category $i$ in week $w$	$T_{ijw}^t$	Total working hours of the $j^{\text{th}}$ temporary nurse of category $i$ in week $w$
$X_{ij}$	1 if the $j^{\text{th}}$ nurse of category $i$ is counted in the workforce; otherwise 0		

The ultimate target of the model is to project the optimal nursing workforce required for each staff category. The target can be expressed as:

$$N_i^p = N_i^c + N_i^h - N_i^f \quad (1)$$

The objective seeks to minimize the total staffing costs for all demands of all residents.

$$M \dot{n} . Cost = \sum_{i \in I} \left( \sum_{j \in J} X_{ij} S_{ij} + \sum_{j \in J} R_i^{op} \sum_{m \in M} R_{ijm}^{ot} \right) + \sum_{\ell \in L} (C_i^h N_i^h + C_i^f N_i^f + C_i^t T_i^t) \quad (2)$$

The proposed model is subject to constraints (3) – (9). The constraints apply to projected demand (3), skill mix (3), shift assignment (4) – (6) and work limit (7) – (8).

$$\sum_{i \in I} \left\{ \sum_{j \in J} [X_{ijm} U(1 + R_{ijm}^{ot})] \right\} + T_m^t \geq \sum_{k \in K} \sum_{l \in L} N_k T_{kl} X_{ktm} \quad M_i \quad (3)$$

$$\sum_{m \in M} X_{ijm} \leq X_i^{w,m \text{ ax}} \quad (4)$$

$$X_{ijm} + X_{j(m+1)} \leq 1 \quad (5)$$

$$2 \leq X_{ijm} + \dots + X_{j(m+8)} \leq 3 \quad (6)$$

$$T_{ijw}^t \leq T_w^{w,m \text{ ax}} \quad (7)$$

$$R_{ijm}^{ot} \leq O_m^{m \text{ ax}} \quad (8)$$

#### IV. Feasibility Study

In order to demonstrate the usage of the model in solving the practical nursing workforce planning problem, a local subvented nursing home has been selected as the reference case, and the staff of the nursing home were consulted. The main points of interest in the consultation were summarized below:

1. The schedule was produced manually in all cases once every two weeks, and computerized solution would be desired.
2. The average time taken for producing a bi-weekly schedule is about 2 hours, though the actual hours may be varied and lengthened to 1 day.
3. Problems frequently highlighted included achieving the required skill mix, balancing the staff load, spreading nurses across shifts and fulfilling the legal requirement.

Data sets were obtained; however are revised due to confidentiality issues. The values for initial stage study are

listed in Table 3. At present, 5, 2 and 2 staff from category 1, 2 and 3, respectively are on duty for every shift, with a monthly total staffing cost of about HK0.3 million. Currently, no temporary staff has been employed and the staff sometimes need to work overtime in order to complete all the service tasks within the shift.

**Table 3**  
**Values of the Local Subvented Nursing Home for Initial Stage Study**

Notation	Value	Notation	Value	Other information	Value
$N_1^c$	15	$R_3^{op}$	230	Total service time required in shift 1, 4, 7, .....34, 37, 40	1725
$N_2^c$	6	$O_{1m}^{max}$	4	Total service time required in shift 2, 5, 8, ..... 35, 38, 41	2355
$N_3^c$	6	$O_{2m}^{max}$	4	Total service time required in shift 3, 6, 9, 36, 39, 42	1020
$S_1$	\$8500	$O_{3m}^{max}$	4		
$S_2$	\$12,000	$X_1^{w,m,ax}$	6		
$S_3$	\$20,000	$X_2^{w,m,ax}$	6		
$R_1^{op}$	130	$X_3^{w,m,ax}$	6		
$R_2^{op}$	180				

As an initial attempt to study the feasibility and demonstrate the functionality of the proposed model, Excel Solver is used to solve the illustrative example of the local subvented nursing home. Based on the characteristics of the case and the functions of Excel solver, the proposed model is simplified and fine-tuned for feasibility study. The following assumptions apply to the model being solved:

1. Marginal cost associated with hiring additional staff and firing existing regular staff remains constant and equals to the monthly salary of the staff.
2. Monthly salaries of nurses are based on their level (which refers to ‘category’ in the model), subject to a minimum set at mid-point, and are used when projecting manpower requirement.

Due to the restriction of solver regarding not more than 200 variables and constraints it can handle, constraints (4) and (6) are yet to be solved by Excel Solver. The results illustrated that all the service demands can be satisfied within each shift with the total staffing costs of about HK0.15 million. The details of workforce demand projected are shown below in Table 4.

**Table 4**  
**Results Obtained from the Simplified Model by Excel Solver**

Shift	Staff Category	Value	Total service time provided (min)
1, 4, 7, .....34, 37, 40	1	2	1920
	2	1	
	3	1	
2, 5, 8, ..... 35, 38, 41	1	3	2400
	2	1	
	3	1	
3, 6, 9, 36, 39, 42	1	1	1440
	2	1	
	3	1	

## V. Discussion

Being a commonly used commercial application, spreadsheet has been used for prototyping scheduling algorithms

and developing production scheduling systems for manufacturing companies since 1990s (Rice, 2001), and it has also been used by previous researchers to develop prototype for nurse assignment (Punnakitikashem et al., 2006). Prototype designs can then be written in more resilient and efficient programming languages. Therefore, Excel Solver is chosen for the feasibility study as an initial attempt.

The workforce planning problem is NP complete for production system with three or more work centers (Lee & Vairaktarakis, 1997; Vairaktarakisa et al., 2002), the workforce projection model formulated for arbitrary number of nursing home residents is thus NP complete and is not polynomially solvable by simple mathematical approach. Simplification and relaxation of the mathematical model may be required.

As an initial attempt, Excel Solver also confirms that the simplified model is a non-linear problem. Although constraints (4) and (6) are yet to be solved by Excel Solver, the simplified model being solved by Excel Solver is at least being able to generate a feasible result concerning the workforce demand for different staff categories for the various shifts and at a reasonably optimal total staffing cost. The total service time is fulfilled by a mix of suitable nursing staff, no consecutive shifts are allowed, and the legal requirement concerning maximum overtime work is followed. It is projected by the simplified model that only 6, 3 and 3 staff from category 1 to 3 respectively are required to complete the service within each shift, and the total staffing costs have been greatly reduced from HK319,500 to HK147,000, which equivalent to a 54% reduction.

This paper demonstrates the feasibility of the simplified model, and the proposed model will be solved by other algorithms, such as enhanced optimization techniques and heuristics, in the near future. Genetic Algorithms (GAs) are commonly used for solving optimization problems and often yield near optimal or optimal solutions (Goldberg, 1989) and GAs have been applied to solve many production and operations management problems (Aytug et al., 2003) as well as workforce planning problem (Fowler et al., 2008). Moreover, it is found that GA usually provided the best results in terms of cost minimization when comparing with linear programming based heuristics (Fowler et al., 2008). GA will be used in the future attempts for near-optimal solution computation.

Concerning the limitation of this paper, there is a lack of similar models in the existing literature for nursing homes and therefore, an evaluation of the quality of the solution via comparison against other existing workforce planning mechanisms in terms of total staffing costs, efficiency, etc., is not possible. Hence, only comparison of total staffing costs against existing workforce planning mechanism of the selected local subvented nursing home is available.

## VI. Conclusions

The ageing population is becoming a global concern. The demands for nursing and healthcare services are dramatically increasing, and the market for residential care services provision are also expanding together with heavy pressure for better utilization of human resources. Efficient and effective workforce planning is one of the solutions for cost effectiveness and long-term competitiveness. This paper models the nursing workforce planning problems and proposes a nursing workforce demand projection model, which tries to project the nursing workforce demand while ensuring reasonable loads are distributed among all the available staff in every shift, and taking into consideration joint requirement of multiple staff types. The model proposed is complicated by the fact that a simple algorithm may not be able to solve it within a reasonable period of time. This paper illustrates how to solve the simplified model by Excel Solver in order to show the feasibility. Results show that the Excel Solver can at least generate feasible results for a simplified model for the workforce demand with the objective of minimum total staffing cost. The proposed model will

be solved by other algorithms, such as enhanced optimization techniques and heuristics, in the near future.

## VII. Acknowledgements

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# Signaling Information in a Vertical Decentralized Supply Chain

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## Abstract

We consider a decentralized supply chain with one manufacturer and one retailer who are engaged in a sequential-move game. The manufacturer and the retailer decide the wholesale price and retail margin to maximize their respective profits. The manufacturer possesses some private information about future demand, and hence enjoys advantage from both Stackelberg leadership and information over the retailer. Though the retailer cannot observe the manufacturer's private information, he can infer it from leader's wholesale price. However, to induce the retailer to reduce retail margin, the manufacturer has to lower down the wholesale price to signal a low demand which benefits the retailer. The general research question is whether the manufacturer's profit is still higher than the retailer's profit, as in the sequential-move game without private demand information. We find that information leakage cost may outweigh the benefit from Stackelberg leadership, and characterize conditions under which the retailer's profit is higher than that of the manufacturer.

**Keywords:** Vertical Supply Chain, Information Leakage, Stackelberg Leadership, Signaling Game

## I. Introduction & Literature Review

We consider a supply chain with one manufacturer selling to one retailer. The manufacturer (Stackelberg leader) decides wholesale price, based on which the retailer (Stackelberg follower) decides retail price. Demand is price-sensitive and fulfilled under a make-to-order mode. In a market without asymmetric information, it is well known that the manufacturer's profit is higher than that of the retailer and hence the manufacturer benefits from Stackelberg leadership.

In some market, the manufacturer may possess some private demand information about future demand as she has superior knowledge about the product. Then, does the manufacturer still earn a higher profit than the retailer? This is the major research question we want to study in this paper. It appears that the manufacturer's profit is still higher, as she benefits from both Stackelberg leadership and her private demand information. However, the retailer would infer the demand information from the wholesale price and hence the manufacturer's information advantage may diminish. What is more, to induce lower retail margin from the retailer the manufacturer has to lower wholesale price to signal low demand. This indeed imposes an implicit

information leakage cost on the manufacturer, which harms the manufacturer while benefits the retailer. In this paper, we demonstrate that the information leakage cost may outweigh manufacturer's benefit from Stackelberg leadership. We further identify conditions under which asymmetric demand information leads to the manufacturer's profit lower than that of the retailer.

Our paper is related to information leakage in a decentralized supply chain. Li (2002) and Zhang (2002) focus on the channel structure of one manufacturer selling to competing retailers. Each retailer observes a private demand signal and may or may not share it to the manufacturer. A retailer would infer demand signals available to the manufacturer based on the wholesale price. This paper studies a one-to-one supply chain and focuses on how information leakage affects firms' benefits from Stackelberg leadership.

The first-mover advantages and disadvantages have been widely studied in literature, especially in models with symmetric information, such as Gal-Or (1985), Spence (1977). Gal-Or (1985) shows that whether the first mover advantage dominates disadvantage depends on whether the follower's reaction function is upward or downward. With asymmetric information, Gal-Or (1987) assumes a linear decision structure (i.e., each firm's decision is linear in information available), and reports that the follower can earn higher profit than the leader. Our model setups are quite different. First, we consider a vertical supply chain while Gal-Or (1987) studies duopoly Cournot competition. Second, only the Stackelberg leader possesses private information in our model, while in Gal-Or (1987) both firms have their respective private information.

This paper is organized as follows. Section 2 presents the model setup, and Section 3 analyzes the signaling game and compares firm profits. We conclude in Section 4.

## II. Model Setup

Consider a supply chain consisting of an upstream manufacturer (she) and a downstream retailer (he). The manufacturer offers the products to the retailer at a wholesale price  $w$ , while the retailer further sells to the end consumers at a retail price  $p$ . The demand is uncertain, and is given by

$$q = a + \theta - p,$$

where  $a$  is a constant representing the certainty part of the market potential, the random variable  $\theta$  with zero mean and variance  $\sigma^2 = \text{Var}[\theta]$  represents the uncertainty part of the market potential, and  $q$  is the sale quantity. The firms are risk neutral and each maximizes its expected profit. The manufacturer incurs a constant unit production cost, and the retailer incurs a constant unit processing cost, both of which we normalize to zero without loss of generalization.

The manufacturer is better informed of  $\theta$  than the retailer. In fact, manufacturers usually have better access than retailers on consumers' preference or taste that cause the uncertainty of demand, and they can acquire the market information in various ways (e.g., through market research, focus groups, online surveys, etc.). For instance, manufacturers like Procter & Gamble collect market and consumer data and analyze it via its powerful data mining tools to translate the raw data into useful demand information. In particular, in our model, the manufacturer observes an (imperfect) signal  $Y$  about the uncertain demand  $\theta$ . The probability distribution of  $Y$  satisfies the following conditions: (C1)  $E[Y|\theta] = \theta$ ; and (C2)  $E[\theta|Y] = \alpha_0 + \alpha_1 Y$ , where  $\alpha_0$  and  $\alpha_1$  are constants (Li and Zhang 2008). Thus  $Y$  is an unbiased signal of  $\theta$ . It can be easily shown that (Li 1985),

conditions (C1) and (C2) imply that  $E[\theta|Y] = \frac{1}{1+s}Y$ , where  $s \equiv \frac{E[\text{var}[Y|\theta]]}{\sigma^2}$ . Apparently,  $s$  is an indicator of signal precision: A larger  $s$  means that the signal  $Y$  is less accurate. This information structure includes well-known conjugate pairs like normal-normal, beta-binomial and gamma-Poisson. Similar to the argument made in Li and Zhang (2008), for beta-binomial and gamma-Poisson, it is easy to find a condition for the equilibrium solutions to be interior points for almost all realizations of the uncertainty almost surely; for normal-normal case, we assume  $\sigma$  is small relative to  $a$ , and hence the equilibrium outcome will be an interior point for most realizations of demand uncertainty and signals.

The sequence of events is as follows.

1. The manufacturer observes  $Y$ . After that, she decides the wholesale price  $w$ .
2. The retailer infers  $Y$  from  $w$ , and then he decides the retail price  $p$ .
3.  $\theta$  is realized, and the manufacturer produces to meet the demand.

In the above sequence, the manufacturer's wholesale price is made before the retailer's retail price decision. Thus the manufacturer is the Stackelberg leader while the retailer is the Stackelberg follower. The second step highlights the key feature of our model. The retailer learns the manufacturer's signal  $Y$  through her wholesale price  $w$ . The manufacturer knows the retailer's rational inference and hence sets a wholesale price by taking retailer's reaction into account. That is, there is a signaling game between the manufacturer and the retailer. The wholesale price plays two roles: Not only it is the transaction term between the two firms, but it is also an instrument of signaling the manufacturer's private information. We solve for the perfect Bayesian equilibrium, and are particularly interested in the optimal pricing strategies and corresponding firm profits.

### III. Analysis

#### 3.1 Equilibrium Pricing Strategies

We analyze the game by backward induction. The manufacturer sets her wholesale price  $w$  based on her private signal  $Y$ . Though the retailer does not observe  $Y$  directly, he will infer it from  $w$ . The retailer conjectures that  $w = f(E[\theta|Y])$ . We restrict the search for equilibria to the subspace where  $f(\cdot)$  is a strictly increasing function. In other words, upon obtaining a more optimistic signal (i.e.,  $Y$  is greater), the manufacturer sets a higher  $w$  in equilibrium. After observing  $w$ , based on his belief  $w = f(E[\theta|Y])$ , the retailer chooses his retail price  $p$  to maximize his expected profit,

$$\pi_R(p) = (p - w)(a + E[\theta|Y] - p). \quad (1)$$

According to the retailer's conjecture, we have  $E[\theta|Y] = f^{-1}(w)$ . The first-order condition (FOC) of  $\pi_R(p)$  with respect to  $p$  leads to the optimal retail price

$$p^*(w) = \frac{a + f^{-1}(w) + w}{2}.$$

The manufacturer observes  $Y$  and knows the retailer's conjecture  $w = f(E[\theta|Y])$ . Anticipating the retailer's optimal retail price as a response to  $w$ , the manufacturer maximizes her expected profit by choosing her wholesale price  $w$ :

$$\pi_M(w) = w(a + E[\theta|Y] - p^*(w)) = w \left( a + E[\theta|Y] - \frac{a + f^{-1}(w) + w}{2} \right). \quad (2)$$

Therefore, given  $f$ , the manufacturer's optimal wholesale price is characterized by the following FOC:

$$\frac{a}{2} + E[\theta|Y] - \frac{f^{-1}(w)}{2} - w - \frac{w}{2} \cdot \frac{df^{-1}(w)}{dw} = 0.$$

In equilibrium, the retailer's conjecture is fulfilled, i.e.,  $E[\theta|Y] = f^{-1}(w)$ . Hence, we replace in  $E[\theta|Y]$  by  $f^{-1}(w)$  in the preceding equation and obtain

$$\frac{a}{2} + \frac{f^{-1}(w)}{2} - w - \frac{w}{2} \cdot \frac{df^{-1}(w)}{dw} = 0.$$

This is a differential equation in  $f^{-1}(w)$ , and the general solution is

$$f^{-1}(w) = -2w \cdot \ln w + C \cdot w - a,$$

where  $C$  is an arbitrary constant. That is, in equilibrium, the following condition must hold

$$E[\theta|Y] = -2w \cdot \ln w + C \cdot w - a. \quad (3)$$

For any demand signal  $Y$ , the manufacturer should choose a wholesale price  $w$  that satisfies (3) to validate a separating equilibrium. On the other hand, as Stackelberg leader, the manufacturer can set  $w$  to her own interest; that is, she chooses a  $w$  that achieves her maximal profit. In fact, her equilibrium profit is  $w(a + E[\theta|Y] - w)/2$ , which is increasing in  $w$  for any  $w \leq (a + E[\theta|Y])/2$ . Note that (3) implies that, for any given signal  $Y$ ,  $w$  is decreasing in  $C$ . Therefore, the manufacturer's maximal profit is achieved at the lowest constant  $C$ . Recall that to fulfill the retailer's conjecture, we must keep  $f(\cdot)$  strictly increasing. Take derivative with respect to  $w$  on the right hand side of (3), and it is positive if and only if  $C \geq 2 + 2 \ln w$ , which must hold for any  $w$ . Hence  $C \geq 2 + 2 \ln[(a + E[\theta|Y])/2]$ . Denote by  $\tilde{Y}$  the upper bound of signal  $Y$ . It is easy to verify that when  $C = 2 + 2 \ln[(a + E[\theta|\tilde{Y}])/2]$ , the manufacturer's profit achieves its maximum and  $f(\cdot)$  is strictly increasing. We summarize the above analysis in the following proposition.

**Proposition 1** *Given a signal  $Y$ , the manufacturer's optimal wholesale price  $w^*(E[\theta|Y])$  is uniquely determined by the following equation:*

$$a + E[\theta|Y] = -2w^* \cdot \ln w^* + \{2 + 2 \ln [(a + E[\theta|\tilde{Y}])/2]\} \cdot w^*. \quad (4)$$

Upon observing  $w^*$ , the retailer infers  $E[\theta|Y]$  and his corresponding optimal retail price is

$$p^* = [a + E[\theta|Y] + w^*(E[\theta|Y])]/2. \quad (5)$$

The optimal wholesale price of the highest signal  $\tilde{Y}$  is given by

$$w^*(E[\theta|\tilde{Y}]) = (a + E[\theta|\tilde{Y}])/2,$$

which is exactly the highest possible wholesale price (recall that any wholesale price should satisfy  $w \leq (a + E[\theta|Y])/2$ ). This is consistent with the existing literature on signaling game that the highest type signal sender takes an ex post efficient action.

**Corollary 1** *When the manufacturer observes the highest possible signal  $\tilde{Y}$ , her optimal wholesale price is ex post efficient, i.e.,  $w^*(E[\theta|\tilde{Y}]) = (a + E[\theta|\tilde{Y}])/2$ .*

When the two firms are equally informed, i.e.,  $Y$  is publicly observable, the manufacturer's optimal wholesale price is  $w_S(E[\theta|Y]) = (a + E[\theta|Y])/2$ , and the retailer's optimal retail price is  $p_S(E[\theta|Y]) = 3(a + E[\theta|Y])/4$ , where the subscript  $S$  indicates the symmetric information case. It is easy to show that for any  $Y < \tilde{Y}$ ,  $w^*(E[\theta|Y]) < (a + E[\theta|Y])/2$ .

**Corollary 2** *When the manufacturer is privately informed of signal  $Y$ , her optimal wholesale price is distorted downward comparing to its counterpart when both firms are equally informed of  $Y$ . That*

is,  $w^*(E[\theta|Y]) \leq w_S(E[\theta|Y])$ , where the strict inequality holds for all  $Y < \tilde{Y}$ .

### 3.2 Firm Profits

Substitute the equilibrium prices (4) and (5) into the manufacturer's profit (2) and the retailer's profit function (1), and we obtain the firms' equilibrium profits. Specifically, for a given signal  $Y$ , the manufacturer's equilibrium profit is given by

$$\pi_M(E[\theta|Y]) = w^*(E[\theta|Y]) \cdot [a + E[\theta|Y] - w^*(E[\theta|Y])]/2,$$

and the retailer's profit is given by

$$\pi_R(E[\theta|Y]) = [a + E[\theta|Y] - w^*(E[\theta|Y])]^2/4.$$

**Lemma 1** Given a signal  $Y$ ,  $\pi_M(E[\theta|Y]) \leq \pi_R(E[\theta|Y])$  if and only if  $w^*(E[\theta|Y]) \leq (a + E[\theta|Y])/3$ .

By Lemma 1, the manufacturer's profit may be lower than the retailer's profit. Plugging  $w^*(E[\theta|Y])$  into the inequality  $w^*(E[\theta|Y]) \leq (a + E[\theta|Y])/3$ , we obtain the sufficient and necessary condition under which the manufacturer earns less than the retailer, as stated in the following proposition.

**Proposition 2** The manufacturer's profit is lower than the retailer's profit if and only if  $E[\theta|Y] \leq \frac{6\sqrt{c}}{a+E[\theta|\tilde{Y}]} - a$ .

At first glance, the manufacturer has two advantages. On one hand, she possesses a private demand signal  $Y$ , which we dub as "*informational advantage*". On the other hand, her wholesale price decision is made before the retailer's retail price decision, which we dub as "*leadership advantage*". Interestingly, Proposition 2 shows that when the manufacturer observes a very pessimistic signal, her two advantages are jointly transformed to *disadvantage*, i.e., her profit is even lower than the retailer's (follower's) profit. In such cases, the manufacturer is worse off by possessing a private signal and by making the wholesale price decision before the retailer.

Ironically, when the manufacturer uses her "leadership advantage" to show her "informational advantage", she may lose. The manufacturer always wants to convince the retailer that the demand is "weak", so as to induce a low retail price and a good sales quantity. However, the retailer knows the manufacturer's intention and correctly infers the manufacturer's demand signal. As a result, a "weak" manufacturer (i.e., the manufacturer who observes a low demand signal) has to significantly lower her wholesale price to tell the retailer she is "really weak". The wholesale price is not only a transaction term, but is also an information conveyor. It is the latter role that causes the manufacturer's loss. By Corollary 2, when the manufacturer has the two advantages, her wholesale price is lower than that in the symmetric information case. "Information advantage" exerts an opposite influence on "leadership advantage". When the demand is too pessimistic, the manufacturer's power to set the wholesale price ahead of retailer setting the retail price is translated to a very poor wholesale price signaling the weak demand. Therefore, the two advantages together sometimes convert to disadvantage, that is, *one plus one is even less than zero*.

### 3.3 More about the Leadership Advantage

To understand the impact of manufacturer's leader position on firms' profitability, we consider a benchmark case where the manufacturer and the retailer are both informed of the demand signal  $Y$  and they *simultaneously* decide their wholesale price  $w$  and retail margin  $m$ . It can be easily derived that, in this benchmark case, the manufacturer's optimal wholesale price is  $w_B = (a + E[\theta|Y])/3$  and the retailer's

optimal margin is  $m_B = (a + E[\theta|Y])/3$ , where the subscript  $B$  denote the benchmark case. Consequently, given a signal  $Y$ , the firms' equilibrium profits are the same and equal to  $\pi_{MB}(E[\theta|Y]) = \pi_{RB}(E[\theta|Y]) = (a + E[\theta|Y])^2/9$ .

**Proposition 3**  $\pi_M(E[\theta|Y]) \leq \pi_{MB}(E[\theta|Y])$  if and only if  $E[\theta|Y] \leq \frac{6\sqrt{e}}{a+E[\theta|Y]} - a$ .

Proposition 3 indicates that if the manufacturer has a private demand signal and moves first, her profit may be lower than that when the demand is public and two firm moves simultaneously. Proposition 3 confirms Proposition 2 in that when the demand signal is low enough, “informational advantage” and “leadership advantage” together do not benefit the manufacturer at all.

### 3.4 Numerical Studies on Firms' Ex ante Profits

We study firms' ex ante profits numerically. We assume that  $\theta$  is normal distributed, i.e.,  $\theta \sim N(0, \sigma^2)$ , and hence  $Y \sim N(0, (1+s)\sigma^2)$ . We numerically study the impact of maximal signal and signal precision on firms' ex ante profits, with  $a = 200, s = 0.1, \sigma = 1$ .

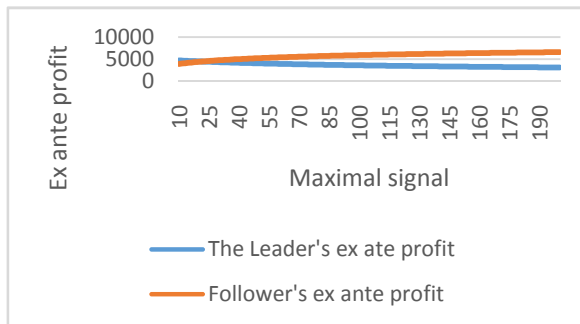


Figure 1. The impact of maximal signal  $\tilde{Y}$

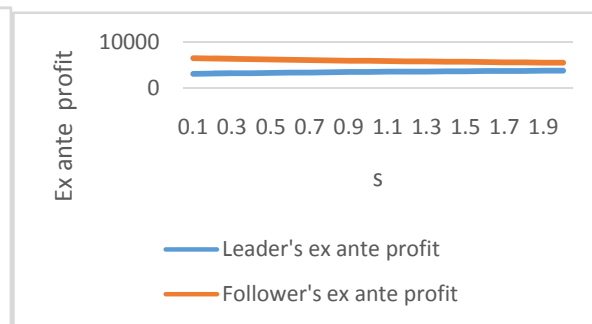


Figure 2. The impact of signal precision  $s$

From Figure 1, the manufacturer's ex ante profit is decreasing with  $\tilde{Y}$  while the retailer is increasing with  $\tilde{Y}$ . When  $\tilde{Y}$  high enough, the retailer's ex ante profit is greater than the manufacturer's profit. Figure 2 shows that the manufacturer's (retailer's) ex ante profit is increasing (decreasing) with signal precision. Hence the impact of the signal accuracy on the ordering of firm profits is less significant than that of maximal demand signal.

## IV. Conclusions

We study information leakage in a single supply chain where the manufacturer is better informed of the uncertain demand than the retailer. We fully characterize the optimal pricing strategies and firms' corresponding profits. The manufacturer's wholesale price plays two roles: It is a transaction term between the two firms, and it conveys the manufacturer's private demand signal. In equilibrium, the manufacturer lowers her wholesale price comparing to that in the symmetric information case, while sets an ex post efficient wholesale price when observing the highest possible signal.

The manufacturer appears to benefit from both informational advantage and Stackelberg leadership advantage. However, these two advantages together may lead to disadvantage. This is because the wholesale price may have to be substantially lowered when the demand signal is pessimistic. This interesting result is like *one plus one is even less than zero*.

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## **Antecedent and Consequences of Firm Agility**

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### **Abstract**

As access to the internet continues to expand, customers are getting information about products and services from a variety of different sources including virtual communities, trusted friends, blogs, and corporate websites. Further, the marketplace where firms compete has gone global as customers can access information about products and services and order them from anywhere. For firms to successfully compete in this expanding global marketplace, they must develop strategies articulate their unique competitive advantage. A component of the firm's strategy must focus on developing agility in its processes and procedures. For the firm to become agile, it must possess unique capabilities that permit it to become agile. This agility allows firms to detect opportunities, sense change, seize the opportunity and respond to the marketplace demands. Previous research has recognized the importance of firm agility and its impact on firm performance. As such, agility is emerging as an important dynamic capability that can determine a firm's success in the globalized competitive markets. This study develops and empirically tests a conceptual model that captures the relationships among firm agility, customer orientation as an antecedent and two consequences of agility. Those consequences are market performance and financial performance of the firm. This study also evaluates the moderating effect of the innovation strategy the firm pursues



on the agility-firm performance relationships. The innovator strategy embraced by the firm provides unique competitive advantage to differentiate itself from other competitive firms. This innovator strategy can also influence the role and importance of firm agility as a dynamic capability in achieving firm performance. For this study, a survey of U.S. top executives in the chemicals and allied products industry as well as the industrial and commercial machinery industry was used to provide insights. Results from this study highlight that firms classified as innovators need to possess agility to attain financial and market performance. Thus, the results of this study show that the firm agility-performance relationship is moderated by the type of innovation strategy pursued by the firm. This study reports that the firm agility is positively related to market and financial performance for innovators but not for non-innovators. These results suggest that innovators need to pursue firm agility in addition to innovativeness to be successful. However, just being innovative will not permit innovators to maintain their market leadership as non-innovators are competing with other competitive advantages such as cost. Yet, for the non-innovator firms, agility is not the type of dynamic capability needed for success. To validate the findings of this study, further research utilizing data from additional firms from other manufacturing and service industries are required. Also, other contingency factors on the agility-performance relationships need to be studied. As this study only considered customer orientation as the antecedent of firm agility, future research should test other antecedents of firm agility to fully understand the role of agility in achieving firm performance and should improve the agility measurement scale developed for this study.

**Keywords:** firm agility, innovation strategy, customer orientation, firm performance

## I. Introduction

With increased competition in the global marketplace, firms must be both flexible and responsive. In the globalized market, customers are more empowered due to increased access to rich online information and to information available on e-commerce sites. The availability and access to diverse shopping alternatives and options can make global customers less loyal and less forgiving. As a result, firms need to continually pay attention to site visitors and must monitor their products and services to retain customers. Firms are required to quickly adjust product and service offerings and features and deliver those products and services when and where customers want those products and services. Providing the relevant product and services to their target customers is increasingly becoming an important priority and competitive advantage for firms in a highly competitive globalized market. Thus, with an environment increasingly characterized by instantaneous changes, both product innovation and market flexibility are becoming even more critical. In the fast-moving environments open to global competition and characterized by dispersion in the geographical and organizational sources of innovation, sustainable advantage requires unique and difficult-to-replicate capability (Teece, 2007). Thus, it is reasonable to argue that firms must possess innovation capability and achieve greater market flexibility to remain competitive in today's global marketplace. Thus, innovation and agility are seen as enablers for firms to sustain competitive advantage in a rapidly changing environment (Chen & Huang, 2009; Subramaniam & Youndt, 2005).

Previous research has recognized the importance of firm agility, in addition to innovativeness, and its impact on firm performance. In order to quickly customize and adapt to changes in market trends and customer preferences, firms need to become agile. Agility is emerging as an important dynamic capability that can determine a firm's success in the globalized competitive markets (Haeckel, 1999; Roberts & Grover, 2012; Zaheer & Zaheer, 1997).

However, little attention has been given to the contingencies of the agility-firm performance relationship. To address these attendant concerns, a conceptual framework is developed to integrate a key antecedent and two consequences of firm agility. Thus, this conceptual model captures the role of firm agility while incorporating customer orientation as an important antecedent. Specifically, the purpose of this study is to examine the relationships among firm agility, customer orientation as an antecedent of firm agility and two consequences of firm agility (market performance and financial performance). This study further evaluates the moderating effect of innovation strategy on the agility-firm performance relationships while controlling for firm size and years of employment. It should be of interest to marketers and managers as it extends knowledge of the role and significance of firm agility in the globalized competitive markets.

## **II. Theory Development and Hypotheses**

Critical to a firm's survival is its ability to become innovative and agile by developing a number of innovative product and process technologies and by being flexible in introducing, manufacturing, and delivering products and services to target customers. This is an ongoing process in which the firm must balance maintaining its current products and services and resist systemic rigidity so that it can redeploy assets to pursue new concepts that meet customer needs based on strategic sensitivity (Doz and Kosonen, 2008; Di Minin, et al 2014). This study develops and empirically tests a conceptual model presented in Figure 1. The Figure 1 model captures the relationships among firm agility, customer orientation as an antecedent and two consequences of agility. Those consequences are market performance and financial performance of the firm. This study also evaluates the moderating effect of the innovation strategy the firm pursues on the agility-firm performance relationships. The innovator strategy embraced by the firm provides unique competitive advantage to differentiate itself from other competitive firms. This innovator strategy can also influence the role and importance of firm agility as a dynamic capability in achieving firm performance. As shown in the figure, firm agility mediates the relationship between the antecedent and firm performance with the central focus of the model on firm agility.

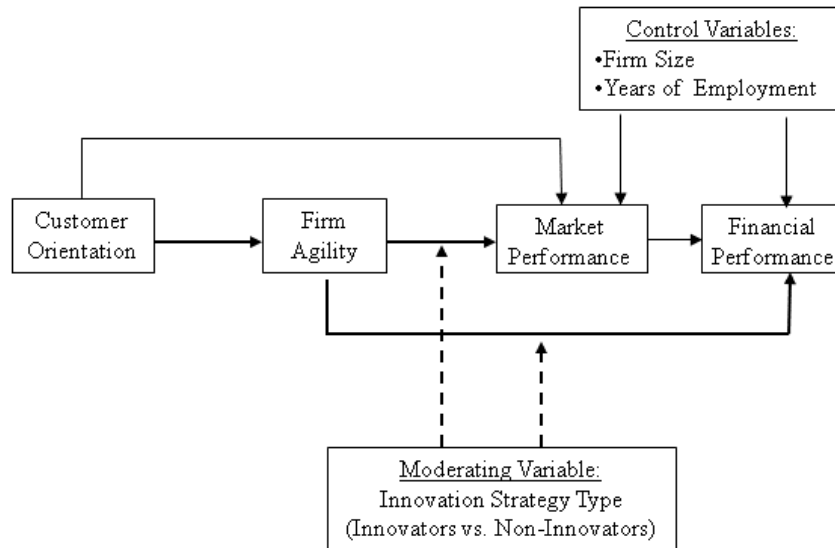


Figure 1. Conceptual Model

### Firm Agility and Customer Orientation

Firm agility can be considered as a firm’s dynamic capability that enables firms to quickly and effectively respond to market trends and customer preference changes and develop competitive advantage (Tallon and Pinsonneault, 2011; Roberts & Grover, 2012). Agility needs to be fostered within firms through the development of strategic sensitivity, leadership unity, and resource fluidity (Doz and Kosonen, 2010). Customer responsiveness is a key factor related to strategic sensitivity.

Firm or organizational capabilities “are firm specific, emerge gradually over time, are tacit ; participants may be unaware of their existence, are path dependent, influenced by a firm’s history and actions of its decision makers, and are empirically validated, through their application to problems faced by the firm (Wu, Melnyk and Flynn, 2010). Firm capabilities can also be viewed as “bundles of more specific skills, procedures, and processes that can leverage resources into competitive advantage. It is the combination of the resources and capabilities that leads to competitive advantage” (Baker & Sikula, 2005). Thus, dynamic capabilities are defined as the set of specific and identifiable strategic and organizational processes through which firms manipulate resources into value-creating strategies within a dynamic marketplace ((Teece, Pisano, and Shuen, 1997; Eisenhardt & Martin, 2000). The dynamic perspective allows firms to be both reactive and proactive in adapting to environmental changes by building, leveraging, and reconfiguring their capabilities (Eisenhardt & Martin, 2000; Sanchez, 2004; Teece, Pisano, & Shuen, 1997). In the spirit of the resource-based theory, capabilities should be valuable, difficult to produce, rare, and non-substitutable (Barney, 1991; Day, 1994; Wernerfelt, 1984). Capabilities enable firms to create, deploy and protect the intangible assets that support superior long-run business performance (Teece, 2007).

Previous research studies have conceptualized and defined firm agility in many different ways. As indicated earlier, firm agility is viewed as an organizational capability, a set of organizational routines and processes that

produces a particular desired output (Dove, 2001). Thus, agility refers to the ability to sense and respond to the marketplace quickly and involves processes such as customer-based practices, supply chain activities, or systems development (Sambamurthy, Bharadwaj, & Grover, 2003; Rapp, Trainor, & Agnihotri, 2009; Teece, 2007). Four noteworthy studies have defined and provided different focus on agility. First, Sambamurthy, et al. (2003) defined agility as the ability to detect opportunities for innovation and seize those competitive market opportunities by assembling requisite assets, knowledge, and relationships with speed and surprise. Second, Overby, Bharadwaj, and Sambamurthy (2006) defined agility as the ability of firms to sense environmental change and respond readily. Third, Setia, Sambamurthy, and Closs (2008) defined agility as an organization's ability to discover new opportunities for competitive advantage, harness the existing knowledge, assets, and relationships to seize these opportunities, and adapt to sudden changes in business conditions. Fourth, Roberts and Grover (2012) defined agility as the degree to which a firm is able to sense and respond quickly to customer-based opportunities for innovation and competitive action. Key components in the definition of agility in these studies involved the ability to detect opportunity, sense change, adapt and respond to the market. By integrating these key concepts, in this study, agility is defined as the dynamic capability to sense and respond quickly to emerging opportunities and changes in business conditions.

As noted by Roberts and Grover (2012), customer orientation and firm agility are two distinctive concepts. Firms need to be customer-oriented to be agile. Customer orientation includes intelligence dissemination that is critical to a firm's ability to sense and respond to market opportunities (Kohli & Jaworski, 1990; Teece, 2007). While customer orientation concerns a firm's ability to respond to customer needs, agility goes beyond being customer oriented. Agility requires a firm's capability of building higher-order routines such as quickly modifying its manufacturing capabilities to serve emerging customer segments. Thus, customer orientation can facilitate firms to be more agile by better responding customer-based opportunities in turbulent markets (Roberts & Grover, 2012). Based on these discussions, the following hypothesis is presented.

**Hypothesis 1:** Global customer orientation is positively related to firm agility.

#### **Moderating Effect of Innovation Strategy on Agility-Firm Performance Relationship**

Agility can offer firms a wide variety of competitive actions and feasible responses to respond to changes and control environmental risk (Benaroch, 2002; Benaroch, Lichtenstein, & Robinson, 2006; Fichman, 2004; Sambamurthy, et al., 2003). Agile firms allow the firm to be innovative and to actively respond to new market opportunities as they occur with market-response options (Meyer, 1982; Nohria & Gulati, 1996). Agile firms can improve firm performance by exercising these various options. Effective implementation of these options can offer firms increased revenues, profitability, cost avoidance, and market growth (Sambamurthy, et al., 2003; Tallon & Pinsonneault, 2011).

Innovation has long been recognized as one of the critical functions for the firm (Mohr and Sarin, 2009). There are firms that aggressively pursue strategies that lead to innovation and there are those that because of over commitment to prior innovations are unable or unwilling to activate pursue new ideas. Then when a new disruptive innovation comes along (Christensen, 1997) the firms that are not strategically proactive are able to understand the

change or marshal resources in response to the innovation. The innovator strategy pursues the active design and development of the innovation idea. Innovation activities undertaken by the firm focus on the successful implementation of an idea for a product in a certain market (Bode & Alig, 2011). The firm must assess their potential resources and intellectual capital, and then select an appropriate innovation strategy to match their objectives and capabilities. The resource profiles of the firm indicate their ability to respond to market opportunities with the various innovation strategies (Chen, Su, & Tsai, 2007). Each of the innovation strategies evaluated by the firm provides different advantages and has different requirements of the firm. Ultimately, the innovation strategy chosen by the firm can help the firm differentiate itself from other firms through innovativeness of their products and services (Bode & Alig, 2011). Innovativeness captures the firm level inclination or focus on innovation and innovative behavior and determines the firms' competitive priority and resource allocation (Hult, Hurley, & Knight, 2004; Menguc & Auh, 2006). Innovation strategies promote risk taking and new approaches to various organizational activities that may allow firms to respond more effectively to the market (Hurley & Hult, 1998; Hult, Ketchen, & Slater, 2005; Wei & Wang, 2011). Innovative firms are more likely to respond to potential market opportunities and try feasible responses to market changes (Atuahene-Gima, 2005).

The innovator firm may also choose to share the developed intellectual property with other non-innovators such as followers to begin to develop an industry standard for the innovation idea or to slow potential competitors down by signaling active innovation efforts underway at the firm. Many firms prefer to orient their innovation strategy towards being a follower. Followers may potentially take a wait and imitate attitude (Pacheco-de-Almeida & Zemsky, 2012). Being a smart follower enables the firm to reduce the risks associated with new product development and gain cost advantages by learning from the leader or innovator firm (Brook, 2011).

With fast product development cycle and increased competition, firms need to have the capability of being agile to become an innovator. The type of innovation strategy followed by a firm can drive the relative importance of agility and influence the agility-firm performance relationship. The chosen innovation strategy can influence the firm resource allocation and competitive focus of a firm. Innovators must focus on firm agility in addition to innovativeness of products and services to improve their firm performance. While there is evidence to suggest a direct link between innovativeness and business performance (Hult, et al. 2004; Hog & Ha, 2009; Menguc & Auh, 2006; Zhang & Duan, 2010), agility is also important for innovators, to improve firm performance. Both becoming innovative and agile requires high level of attention and resources, most innovators would expect agility has a more positive impact on their business performance than non-innovators. On the other hand, as non-innovators are focusing on learning and adapting to innovators' product offerings, the ability to identify and respond to environmental changes can be less critical for their market and financial performance. These discussions suggest that the effect of firm agility on business performance may vary depending on the firm's innovation strategy.

**Hypothesis 2:** The relationship between firm agility and market performance is moderated by a firm's innovation strategy such that the relationship will be stronger for innovators than non-innovators.

**Hypothesis 3:** The relationship between firm agility and financial performance is moderated by a firm's innovation strategy such that the relationship will be stronger for innovators than non-innovators.

### **III. Research Design**

#### **Sample and Data Collection**

Data were collected for this study via a mail survey. Top executives of manufacturing firms from two industry groups were selected for this study using a key informant approach. The two industry groups that were selected were the chemicals and allied products (SIC 28) and industrial and commercial machinery (SIC 35). The sampling frame was based on a computerized mailing list from Dun and Bradstreet, Inc. A total of 1,048 manufacturing firms were selected using a systematic random sampling procedure. To obtain a more homogeneous sample, only home offices were included, thereby eliminating subsidiaries, divisions, plants, and regional offices. A postcard was first sent to the selected firms requesting cooperation and participation in the survey. One week after the postcard was mailed, the questionnaire was sent out to the chief executive officer of the selected firms. A second wave of questionnaires was sent to all non-respondents six weeks after the initial mailing. A total of 172 useable responses were obtained after the three waves resulting in a response rate of 16.4 percent. The response rate reported in this study is similar to those obtained in other large-scale surveys of executives and managers (Glaister, Dincer, Tatoglu, Demirbag, & Zaim, 2008).

Of the 172 respondents, 50 percent were presidents or vice presidents, 25 percent were marketing managers, 15 percent were business unit managers and the remaining 10 percent were either project managers, or team leaders. Respondents had been in their current position for less than 5 years (47 percent), for 6 to 10 years (28 percent), and for more than 10 years (25 percent).

#### **Description of the Measures**

Most of the measures were adapted from previous studies. Customer orientation measure was adapted from Kohli and Jaworski (1990). The three items anchored by 7 (To an extreme extent) and 1 (Not at all) capture "monitoring commitment and orientation to customers", "marketing strategy driven by creating customer value", and "competitive advantage strategy based on understanding of customer value". Firm agility was measured by four items anchored by 5 (To an extreme extent) and 1 (Not at all) and included such phrases as "take quick actions to solve problems in product development", "quickly adjust production to fluctuations in demand", and "make design changes to meet customer specifications." Market and financial performance were measured by using three rating scale items anchored by 5 (Top 15%) and 1 (Bottom 10%) when compared to all competitors. Market performance was measured by "sales growth position relative to competition", "satisfaction with sales growth", and "market share gains relative to competition". Financial performance items pertained to the subject's perception of "ROI position", "return on corporate investment", and "financial liquidity position". These constructs served as the dependent measure; the items were adapted in part from Moorman (1995), Griffin and Page (1993) and Morgan and Strong (2003).

Firms are classified into innovator and non-innovators based on the primary innovation strategy pursued by a firm. Out of 172 responding firms, 71 firms were classified into innovators and the remaining 101 firms were classified into non-innovators. The control variables included in the study are firm size and the respondent's years of working in the present position. A firm's size may have influenced the antecedents of performance and business

performance (Glaister, et al., 2008; Pearce, Freeman, & Robinson 1987). It was defined as the number of employees in a firm (Im & Workman, 2004; Narver & Slater, 1990) and was used to control for the impact of a firm’s resources on business performance (Chandy & Tellis, 2000; Im & Workman, 2004; Lin, Lee, & Hung, 2006; Narver, Slater, & MacLachlan, 2004). Also included, as a control variable, was the number of years the respondent’s was in their present position. It was envisioned that “years in the present position” should count for industry experience and how to deal with or confront different situations (Zahra and Nielsen, 2002).

## IV. Results

### Confirmatory Factor Analysis

The measurement properties were assessed in one confirmatory factor analysis (CFA). Confirmatory factor analysis results of the measurement items are presented in Table 1. Table 1 shows means, standard deviations, composite reliabilities, average variance extracted, factor loadings, and goodness of fit indices. The fit indices showed that the model resulted in a good fit to the data ( $\chi^2 = 136.54$ , d.f. = 59, normed fit index (NFI) = .90, comparative fit index (CFI) = .94, root mean square residual (RMSR) = .073).

All the items loaded significantly on the expected constructs indicating convergent validity of the measures. The composite reliabilities for the four scales ranged from .73 to .87, with factor loadings ranging from .47 to .92 ( $p < .01$ ). The discriminant validity was assessed by two different methods. First, the average variance extracted was examined for the constructs that ranged from .41 to .70. The average variance extracted for each construct was higher than the corresponding shared variance for all possible pairs of constructs. Second, the chi-square difference tests were performed for all possible pairs of constructs. The correlations between constructs ranged from .20 to .75. In all pairs of constructs, the critical value was exceeded indicating discriminant validity. The CFA results suggest that all measurement scales have adequate reliability and validity.

Because data were collected from single informants using the same survey instrument, Harman’s single factor test was performed to verify the presence of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The fit of a model in which indicators loaded on one factor was examined. If method variance was largely responsible for the covariation among the measures, a confirmatory factor analysis would indicate that a single factor fits the data. A one factor model did not fit well ( $\chi^2 = 452.96$  with 65 d.f., NFI = .69, RMSR = .16). These results indicate that there is no strong common method bias present in the data.

**Table 1**

### Confirmatory Factor Analysis Results

	Number of Items	Mean	Standard Deviation	Composite Reliabilities(CR)	Lambda Coefficients	Average Variance Extracted (AVE)
Customer Orientation	3	5.54	0.92	.80	.73 - .79	.57
Firm Agility	4	5.01	1.30	.73	.47 - .80	.41

Market Performance	3	4.20	1.65	.87	.72 - .92	.70
Financial Performance	3	4.70	1.42	.84	.75 - .85	.64

Fit Indices:  $\chi^2 / \text{d.f.} = 136.54 / 59$ ; Normed Fit Index (NFI) = .90; Comparative Fit Index (CFI) = .94; Root Mean Square Residual (RMSR) = .073.

### Hypotheses Testing

Data were analyzed by path analysis using LISREL 8.8. In testing the path model, the summated scores of the scale items were used as indicators of the construct. Using the multi-group LISREL approach, the path model was estimated for the two innovation strategy type firms. Table 2 provides the standardized LISREL estimates, global goodness-of-fit indices, the chi-square difference test results. The global fit indices indicate a good fit of the model for the data. The chi-square for the model is 15.46 with 12 degrees of freedom. The normed fit index (NFI) is .90 with comparative fit index (CFI) of .97. The root mean square residual (RMSR) is .053.

**Table 2**

### Multi-Group LISREL Analysis Results

Path: From	To	Innovation Strategy Type		Chi-Square Difference Test		
		Innovators	Non-Innovators	$\Delta\chi^2$	Significance	
Firm Size	→	Market Performance	-.39**	.34**		
Firm Size	→	Financial Performance	-.20*	-.04		
Years of Employment	→	Market Performance	-.19	.01		
Years of Employment	→	Financial Performance	.14	-.04		
Customer Orientation	→	Firm Agility	.28**	.28**		
Customer Orientation	→	Market Performance	-.10	.26**		
Firm Agility	→	Market Performance	.34**	-.06	7.26	p < .01
Firm Agility	→	Financial Performance	.17*	-.09	4.75	p < .05
Market Performance	→	Financial Performance	.61**	.54**		

Global Fit Indices:  $\chi^2 / \text{d.f.} = 15.46 / 12$ ; Normed Fit Index (NFI) = .90; Comparative Fit Index (CFI) = .97; Root Mean Square Residual (RMSR) = .053.

\* p < .05; \*\* p < .01.

To test whether the path coefficients for the two innovation strategy type firms are significantly different, chi-square difference with one degree of freedom was calculated between the unconstrained model and constrained model with the path coefficient equalities. The chi-square difference test results are presented in Table 2.

The path coefficients from customer orientation to firm agility are significant for both innovators and non-innovators with the path coefficient of .28 and .28 respectively. These results provide support for hypothesis 1. The path coefficients from firm agility to performance for the two innovation strategy type firms were compared to test the moderating effect of the type of innovation strategy. The chi-square difference test result showed that the two



path coefficients are significantly different ( $\Delta\chi^2 = 7.26$  with 1 d.f.,  $p < .01$ ). The path from firm agility to market performance is positive and significant for the innovators but not significant for the non-innovators. The path coefficient for the innovators ( $\beta_{\text{Innovators}} = .34$ ,  $p < .01$ ) was significantly stronger than the path coefficient for the non-innovators ( $\beta_{\text{Non-innovators}} = -.06$ ,  $p > .05$ ). These results provide support for Hypothesis 2. The chi-square difference for the path from firm agility to financial performance is significant ( $\Delta\chi^2 = 4.75$  with 1 d.f.,  $p < .05$ ). The path from firm agility to financial performance is positive and significant for the innovators ( $\beta_{\text{Innovators}} = .17$ ,  $p < .05$ ) but not significant for the non-innovators ( $\beta_{\text{Non-innovators}} = -.09$ ,  $p > .05$ ). Hypothesis 3 is supported by the results.

## V. Discussion

This study developed and empirically tested a conceptual model capturing the antecedent and consequence firm agility. The moderating effect of innovation strategy on the agility-performance relationship was also incorporated in the model. The findings provide some insights on how firm customer orientation influences firm agility and the contingency effect of innovation strategy on the firm agility-performance relationship, and offers theoretical and managerial implications.

The findings show that firm agility-performance relationship is moderated by the type of innovation strategy. Firm agility differentially influences market and financial performance depending on the innovation strategy pursued by the firm. The differential effects of firm agility on firm performance suggest that firms should consider their innovation strategy in pursuing firm agility as their dynamic capability. Firm agility is positively related to market and financial performance for innovators. However, firm agility is not significantly related to market and financial performance for non-innovators. These results suggest that innovators need to pursue firm agility in addition to innovativeness to be successful in competitive global markets. Being innovative alone would not permit innovators to maintain market leadership. For the non-innovators, agility is not the type of dynamic capability needed for success as they are competing in the global market with other competitive advantages such as cost.

This study also found significant effect of customer orientation on firm agility for both innovators and non-innovators. Customer orientation as a component of market orientation is a significant antecedent of firm agility. These results provide support for the importance of understanding and sensing customer needs in order to develop the agility capability of a firm.

While this study found the moderating effect of innovation strategy on firm agility-performance relationship, future research should test other contingency factors on the agility-performance relationships. Future research also needs to evaluate the relative influence of innovativeness and agility on firm performance for innovators. Further research is needed to assess the role of agility as a dynamic capability in achieving competitive advantage and firm performance. As this study only considered customer orientation as the antecedent of firm agility, future research should test other antecedents of firm agility to fully understand the role of agility in achieving firm performance and should improve the agility measurement scale developed for this study. The four-item measure of agility used in this study needs further improvement to fully reflect the domain of the agility construct. As this study tested the proposed model using data obtained from two industry groups, the findings may not be generalizable to firms in

other industries. Additional testing is needed to validate the findings using firms from other manufacturing as well as service industries.

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## Resource Slack, Exploratory-Exploitative Innovation, and Quality

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### Abstract

Research has paid increasing attention to ambidexterity (i.e., exploration and exploitation) in organizational innovation. Mostly, however, focus on the influencing factors leading to possible ambidextrous design or implementation of innovation. Also, few have examined ambidexterity's effects on specific dimensions of innovation (e.g., quality) as outcomes. The present study empirically examined ambidexterity's mediation effect in the relationship between two forms of resource slacks (human and financial resources) and innovation quality. Generally, our findings demonstrated that slack resource is only an indirect factor for product quality evaluated by internal (developers and producers) and external customers. Specifically, first, different resource slacks influence differently on ambidexterity; second, both exploration and exploitation positively influence quality of innovation; third, ambidexterity plays a significant mediator's role that may strategically alter the relationship between slack and quality

**Keywords:** resource slacks, exploitive, explorative, ambidexterity, quality

## How Does Absorptive Capacity Influences Team Effectiveness?

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### Abstract

Through a lens of knowledge and social interactions, the present study reports an empirical investigation regarding how absorptive capacity can lead to better team effectiveness. Data were collected from 522 teams in Taiwan's top thirty consumer electronic manufacturers. The results from path analysis revealed that: first, absorptive capacity positively influences team knowledge sharing, which in turn influences both of cooperation and competition positively, then leading to a increase in team effectiveness. This study supports the general importance of absorptive capacity on team effectiveness. The results contribute beyond extant studies, by exploring a process model that explains the detailed dynamics between absorptive capacity and effectiveness well. Theoretical and practical implications are discussed.

**Keywords:** Absorptive capacity; Knowledge sharing; Cooperation; Team effectiveness

# **Institutional Investors Holding and Manager's On-the-job Consumption: Based on the Empirical Data Shanghai and Shenzhen a Shares Motherboard Market of Listed Companies**

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## **Abstract**

Modern enterprises often separate the ownership and control rights, the owners are willing to employ managers who has high technical skills and full of experience, so as to maximize shareholder value. But, the goal of manager layer and owner often don't agree with each other, they are likely to pursue their own interests and the maximization of utility, the phenomenon of on-the-job consumption of managers is very common in companies. Especially when the enterprise free cash flow is abundant, the possibility of this kind of behavior is largely increasing due to the existence of asymmetric, eventually, the enterprise value will not increase or maybe reduce relatively, then the agency cost between manager and shareholders produced.

This paper tries to research whether the institutional shareholding will inhibit manager's on-the-job consumption behavior. Based on the annual report data of 2010-2013 in Shanghai and Shenzhen main board listed company, this paper collects the proportion of institutional shareholding, divides these companies into state-owned enterprises and non-state-owned holding companies according to the nature of property rights, and analyzes the difference of consumption level in different characteristics enterprise, and then study whether the institutional shareholding and on-the-job consumption level have any relationship.

Refer to dong-hua Chen (2005) annual report "pay the rest of the cash flow related to business activities", This paper use manual summary of eight cost to measure on-the-job consumption. By multiple regression model, using SPSS software for empirical research. Empirical results found that: compared with non-state-owned holding companies, the state-owned holding company's on-the-job consumption level is higher; Institutional shareholding is negatively related to the manager's on-the-job consumption, the relationship is more significant in the state-owned holding company.

**Keywords:** institutional investors, On-the-job consumption, Equity checks and balances, Corporate governance

## The Effects of Metro System on the Trajectory of Housing Prices

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### Abstract

A number of studies have examined the impact of mass rapid transit (MRT) systems on house prices, and the conclusions vary. While prior studies focused on the analysis at an aggregate level, this paper develops multilevel hedonic price model to investigate the effects of MRT lines, particularly the proximity to the train stations and other house/neighborhood-specific characteristics on the longitudinal growth pattern of house prices in Great Taipei on the individual level. Longitudinal data were collected from the database, Real Estate Transaction Price Inquiry System, from the first quarter of 2004 to the second quarter of 2012, when the database was disrupted and switched from a self-assessment to an actual transaction price system. Sample houses are those located within a radius of one kilometer from selected MRT stations. We developed the hierarchical linear model of growth curve to carry out hypothesis tests. The empirical results show that: (1) the growth pattern of housing price over time is significantly upward; (2) the city in which the house is located and the type of building positively moderate such growth trajectory; and (3) the influences of both the distance to MRT on house prices and on the growth pattern of house prices are insignificant.

**Keywords:** real estate, hedonic price model, mass rapid transit, hierarchical linear model



## Using a Hybrid MCDM Model for Green Supplier Selection

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### Abstract

Greening the supply chain is an increasingly important concern for many business enterprises and a challenge for logistics management. Green supplier improvement and selection is a critical function within green supply chain management (GSCM). In this study, we propose a novel hybrid model, which addresses dependent relationships between various criteria and uncertain information from decision-makers. The structure of relations among the criteria and influential weights of the criteria are built with the aid of the DEMATEL-based ANP (DANP). Decision-makers may hold diverse opinions and preferences due to incomplete information, differences in knowledge or simply inherent conflicts between various departments. This can make it difficult to judge the performance of alternatives. To remedy this problem, a modified Complex Proportional Assessment of alternatives with Grey relations (COPRAS-G) is further applied to improve each criterion for integration of the performance values obtained in closing the aspiration level from different expert opinions.

**Keywords:** MADM, Green Supplier Chain Management; DEMATEL, ANP, DANP (DEMATEL-based ANP), COPRAS-G.

## I. Introduction

Green supply chain management (GSCM) is the process of incorporating environmental concerns into business activities. It is considered a new concept that integrates environmental factors into supply chain management through product design, material purchasing, manufacturing processes, final product delivery, and end-of-life management (Sarkis, 2006; Srivastava, 2007; Lin, 2011). To reap the greatest benefits from environmental management, firms must integrate all members in the process. To fulfil this expectation, increasing attention needs to be devoted to the suppliers' social responsibility with a particular focus on fair and legal use of natural resources (Buyukozkan and Cifci, 2012, Alimardani et al., 2013). For example, hazardous substances contained in raw materials provided by suppliers could cause serious environmental impact. The supplier selection process is the most significant variable in the effective management of globalization, as it helps in achieving high quality products and environmental protection. Zhu and Sarkis (2007) pointed out the nature of relationships between GSCM practices and performance, which can include moderated coercive (e.g., environmental regulatory), normative (e.g., market) and mimetic (e.g., competitive) pressures. Stringent environmental regulations and laws that have been established to protect limited resources, include Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and Eco-design for Energy using Products (EuP). The need for green practices is often not just a matter of choice, but is required by law or regulations. This study aims to develop a green supplier improvement-selection model, which considers both the practicality in general supplier improvement-selection criteria and the green concept related to environmental protection and regulations.

To the best of our knowledge, no current study discusses both the interdependency between criteria and the diverse opinions of decision-makers involved in GSCM practices by which to improve and select green suppliers. Our proposed model considers multiple criteria and uses the graph-theory based Decision Making Trial and Evaluation Laboratory (DEMATEL) method using basic concept of ANP (Saaty, 1996), called DANP (DEMATEL-based ANP) to construct the influential relationships and find the influential weights of the criteria. The DEMATEL technique confirms the relationships between various perspectives, enhancing our understanding of the complex evaluating systems. Although the current based on concept of ANP method can deal with influential weights of dimensions (or clusters) within criteria during normalization and formalized in the supermatrix, pair-wise comparisons within clusters/dimensions need to be further surveyed. The DANP method fixes these problems and provides a direction for improvement from the obtained influential network-relationship map (INRM). Furthermore, COMplex PROportional ASsessment method with values expressed in intervals COPRAS-G (Zavadskas et al., 2008) is used to aggregate the performance values to choose the best supplier for the GSCM. COPRAS-G is used because decision-makers may hold diverse opinions and preferences, due to incomplete information and knowledge, or inherent conflict between various departments. A way to cope with uncertain judgments and to incorporate the vagueness that typifies human thinking is to express preferences as an interval. The COPRAS-G method is an effective way to deal with the uncertainty and has been applied in many fields (Aghdaie et al., 2012, Chatterjee and Chakraborty, 2012). Thereby, this study utilizes a hybrid MCDM model that combines DANP with COPRAS-G to solve the interdependencies among criteria in a fuzzy environment.

This hybrid model offers a more useful way to solve the problems of evaluating the green supplier improvement-selection problem. The contribution of this work is that it offers a quantitative model that can help practitioners not only ranking/selecting the alternatives but also improving the direction for their performances. We use data from a Taiwanese electronics company to demonstrate this model.

## II. A brief review of the existing literatures

In the last two decades, topics related to GSCM have extended from conceptual developments to more rigorous empirical and analytical studies (Seuring and Muller, 2008). The integration of environmental concerns within GSCM has itself evolved into a separate and growing field. Hundreds of papers have helped this sub-field progress over the past decades. Some important reviews have been made summarizing the theories, concepts and decision models for this inchoate discipline, for example, the surveys provided by Seuring and Muller (2008), Srivastava (2007), Igin and Gupta (2010), Sarkis et al. (2011) and Govindan et al. (2013). It is known that a high level of environmental performance achieved by a firm may be broken down by a poor level of environmental management by its suppliers. Therefore, green supplier selection is vital in a green supplier chain (Buyukozkan and Cifci, 2012) but there are many gaps in the research in this area that remain to be explored (Kumar et al., 2014). Based on prior studies, we categorize the methodologies for green supplier selection as follows: (1) multi-attribute decision making; (2) mathematical programming models; and (3) intelligent and other approaches.

Most authors used single objective techniques such as linear, integer nonlinear, goal or mixed integer programming, in which one criterion, usually the cost, is considered as the objective function and other criteria are taken into account as constraints (Weber et al., 1991; Hugo and Pistikopoulos, 2005; Talluri and Narasimhan, 2003). On the other hand, some have applied multi-objective mathematical programming to this problem. For example, Ozgen et al. (2008) modelled the supplier selection problem as a two-phase linear programming problem. The required dimensions for evaluating suppliers were delivery reliability, flexibility and responsiveness, cost, assets and environmental responsiveness. Yeh and Chuang (2011) developed an optimum mathematical planning model for green supplier selection, which involved four objectives — cost, time, product quality and green appraisal score. In order to solve these conflicting objectives, they used two multi-objective genetic algorithms to find the set of Pareto-optimal solutions. Shaw et al. (2012) proposed a fuzzy multi-objective linear programming model to select suppliers for the supply chain considering carbon emission. They considered cost, quality, delivery and emissions of greenhouse gases as the four objectives. Tsai and Hung (2009) studied a fuzzy goal programming approach for green supply chain optimization under activity based cost and performance evaluation with a value chain structure.

There are examples (Min et al., 2006; Kuo et al., 2010; Bai and Sarkis, 2010; Punniyamoorthy et al., 2011; Large and Thomsen, 2011) wherein intelligent systems, artificial neural networks (ANN), evolutionary fuzzy systems, genetic algorithms, data-mining approaches, and structural equation modelling have been used to evaluate the green supplier selection. Kuo et al. (2010) integrated ANN, data envelopment analysis (DEA) and ANP methods for green supplier selection. Their model

considers quality, cost, delivery, service, environment and corporate social responsibility as the evaluating criteria. Bai and Sarkis (2010) used the rough set theory to explore the relationship between various decision attributes and performance outcomes. Punniyamoorthy et al. (2011) proposed a strategic model using structural equation modelling and fuzzy logic in supplier selection. Their criteria of supplier selection include management and organization, quality, technical capability, production facilities and capacities, financial position, delivery, safety, cost and environmental concern.

### III. Proposed DANP combining COPRAS-G approach

The proposed method is illustrated as the Fig. 1. The detail formulation and equations could be seen in Liou et al. (2014) and Zavadskas et al. (2008).

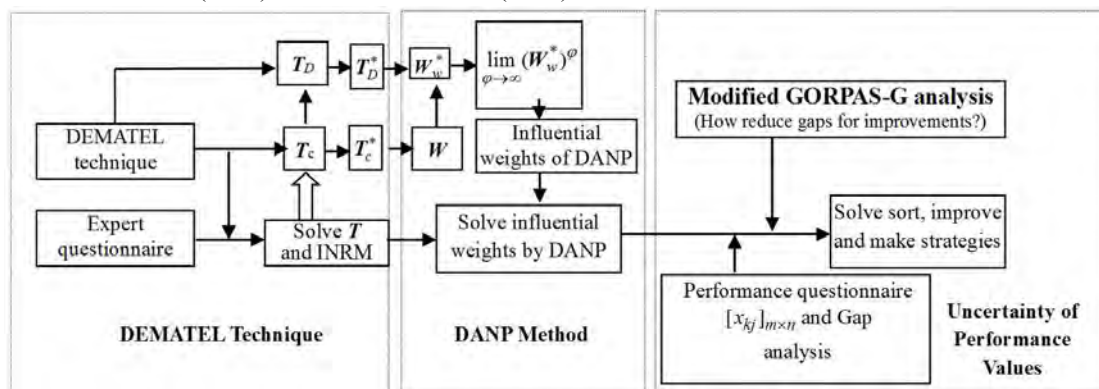


Fig. 1. Model procedures of new hybrid MADM

### IV. Empirical example

#### 4.1. Green supplier selection criteria

Since the process of green supplier selection is a complex system composed of many factors, such as environmental management, design, manufacturing, and compliance with regulations, there is no universal agreement among researchers and practitioners about what exactly constitutes evaluation indicators in the selection processes. This suggests that green supplier selection is context-dependent and selection should reflect the real operating environment of the investigated industry or company. In this study, after consulting with three senior managers and referring to the prior studies, a green supplier selection system having four dimensions with each dimension including six to eight criteria is proposed for further investigation. Then, through a questionnaire survey we asked managers from related departments to rank the importance of each criterion with respect to green supplier selection. In the questionnaire, managers of different departments were asked to rate the importance of the evaluation criteria on a 6-point scale ranging from 5 (extremely important) to 0 (no effect). Finally, the higher scoring criteria in each dimension are extracted and confirmed by managers, then used to construct a system for green supplier selection. Based on the above evaluation process, the evaluation system and its sources within each dimension are identified as given in Table 1.

Table 1. Green supplier selection system

Dimension	Criteria	Sources
Organisational management ( $D_1$ )	Environmental management system ( $C_1$ )	Hsu et al. (2011)
	Training related green management ( $C_2$ )	Hsu et al. (2011); Fu et al. (2012)
	Commitment of GSCM from managers ( $C_3$ )	Zhu et al. (2007)
Operational management ( $D_2$ )	Decreased consumption of hazardous/harmful/toxic materials during manufacturing processes ( $C_4$ )	Zhu et al. (2007)
	Pollution control initiatives and decrease of frequency of environmental accidents ( $C_5$ )	Tseng (2011); Lin et al. (2011)
	Environmental collaboration and information sharing with firm ( $C_6$ )	Zhu et al. (2007); Giovanni & Vinzi (2012)
	Use of cleaner technological processes ( $C_7$ )	Hsu & Hu (2009)
Product design ( $D_3$ )	Applying life cycle analysis to carry out eco-report ( $C_8$ )	Buyukozkan & Cifci (2012)
	Design of products for reduced consumption of materials/energy ( $C_9$ )	Zhu et al. (2007)
	Design of products for reuse and recycling of materials and packaging ( $C_{10}$ )	Diabat & Govindan (2011)
Compliance with regulations ( $D_4$ )	Green certification ( $C_{11}$ )	Zhu et al. (2007); Tseng(2011); Diabat & Govindan (2011)
	Government regulation and environmental legal-compliance ( $C_{12}$ )	Zhu et al. (2007)

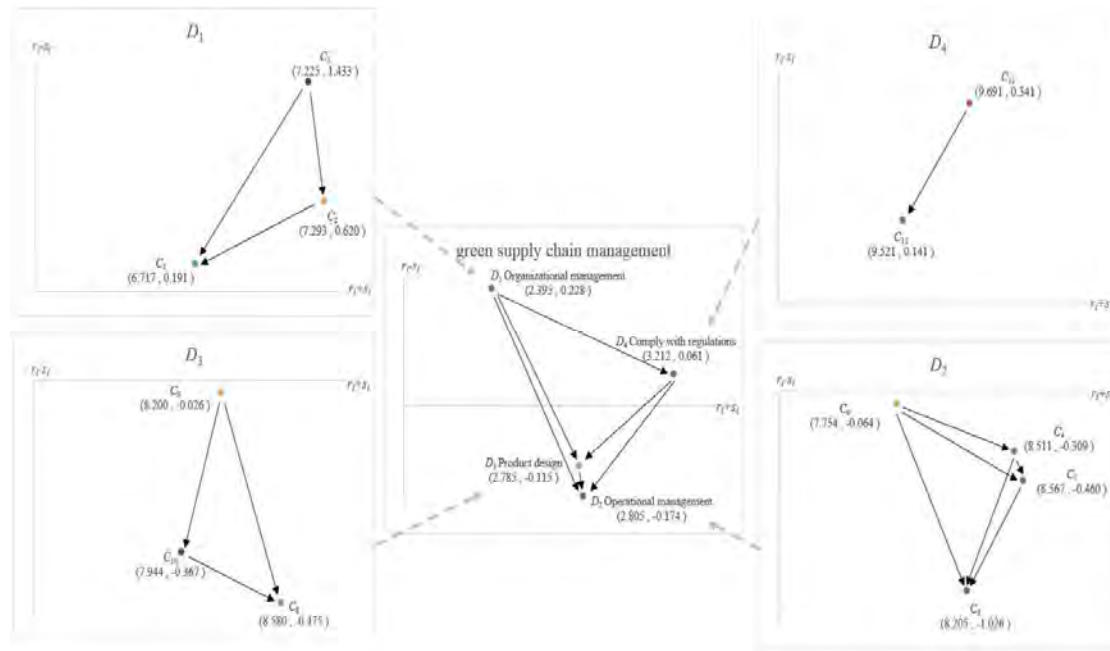
#### 4.2. Measuring the relationships between dimensions and criteria

According to the system (Table 1) and following the DANP procedures, as described in Section 3, managers were asked to determine the degrees of influence of the relationships among the criteria. The average initial direct-relation matrix  $A$  is a 12 x 12 matrix, obtained by pair-wise comparisons in terms of influences and directions between criteria, as shown in Table 2. As can be seen in matrix  $A$ , the normalized direct-relation matrix  $D$  is calculated through DEMATEL method. Then, the total-influence matrix  $T$  is derived. Also, the sum of the influence given ( $r - d$ ) and received ( $r + d$ ) for each dimension and criterion can be obtained.

**Table 2.** Initial Direct Influence Matrix  $A$

$A$	$C_1$	$C_2$	$C_3$	$C_4$	$C_5$	$C_6$	$C_7$	$C_8$	$C_9$	$C_{10}$	$C_{11}$	$C_{12}$
$C_1$	0.00	2.36	2.36	2.43	2.29	3.00	2.71	2.29	1.93	1.86	2.64	2.64
$C_2$	2.43	0.00	2.29	2.79	3.07	2.14	3.00	3.21	2.93	2.79	3.07	2.93
$C_3$	2.79	3.57	0.00	3.00	3.00	3.36	3.29	3.14	3.07	3.14	2.79	2.79
$C_4$	1.14	2.00	1.79	0.00	3.71	2.36	3.21	3.29	3.21	3.07	3.86	3.86
$C_5$	1.93	2.00	1.86	2.71	0.00	2.14	2.71	2.64	2.43	2.36	3.14	3.43
$C_6$	3.07	1.71	1.71	2.79	3.00	0.00	3.07	3.14	2.43	2.71	3.00	3.14
$C_7$	2.00	1.79	1.71	3.21	3.21	2.64	0.00	3.71	3.00	3.00	3.57	3.43
$C_8$	2.21	1.93	1.07	3.29	3.57	2.93	3.50	0.00	3.00	3.14	3.43	3.36
$C_9$	1.64	1.86	1.07	3.57	3.43	2.64	3.21	3.36	0.00	3.21	3.79	3.71
$C_{10}$	1.57	1.64	1.50	3.07	3.14	2.29	3.07	3.43	2.86	0.00	3.29	3.21
$C_{11}$	3.00	3.36	3.14	3.64	3.57	3.36	3.64	3.50	3.50	3.43	0.00	3.86
$C_{12}$	3.36	3.57	3.50	3.71	3.86	3.50	3.79	3.57	3.43	3.43	3.93	0.00

The network-influence relationship can be visualized by drawing an influential network-relationship map (INRM) of the four dimensions and their subsystems, as illustrated in Fig. 2. As shown in this figure, the factors of commitment of GSCM from managers ( $C_3$ ), environmental collaboration and information sharing with firm ( $C_6$ ), design of products for reduced consumption of materials/energy ( $C_9$ ) and green certifications ( $C_{11}$ ) have the largest degree of net influence, under the subsystems of organisational management, operational management, product design and compliance with regulations, respectively. They can be treated as the cause factors in the subsystems.



**Fig. 2.** Influential network-relationship map (INRM) within systems for improvement

The DANP method, which combines DEMATEL with ANP, can be used to obtain indicators of the dynamic relationship within criteria. This information is used to construct an unweighted supermatrix showing the degree of importance of the relations. We also consider the extent of the impact of various dimensions to achieve the weighted supermatrix. The limits of the supermatrix are used to obtain the weights of various factors (global weight). The DANP approach allows us to derive the local weights of the assessment factors at their respective hierarchical levels, and the global weights, which help to understand the absolute weights of individual criteria in the overall perspectives. The results indicate that “compliance with regulations ( $D_4$ )” is the most important dimension and “green certification ( $C_{11}$ )” has the first priority in terms of the global weight (Table 3).

**Table 3.** Influential weights of system factors

Dimensions / Criteria	Local Weight	Global Weight	Ranking
Organisational management ( $D_1$ )	<b>0.193</b>		
Environmental ( $C_1$ )	0.342	0.0662	10
Training ( $C_2$ )	0.351	0.0679	8
Commitment ( $C_3$ )	0.307	0.0593	12
Operational management ( $D_2$ )	<b>0.266</b>		
Decreased toxic materials ( $C_4$ )	0.253	0.0672	9
Pollution control ( $C_5$ )	0.264	0.0701	6
Collaboration ( $C_6$ )	0.224	0.0596	11
Cleaner technology ( $C_7$ )	0.259	0.0687	7
Product design ( $D_3$ )	<b>0.259</b>		
Life cycle analysis ( $C_8$ )	0.353	0.0914	3
Reduced consumption of materials/energy ( $C_9$ )	0.322	0.0833	5
Reuse and recycling of materials and packaging ( $C_{10}$ )	0.325	0.0840	4
Compliance ( $D_4$ )	<b>0.282</b>		
Green certification ( $C_{11}$ )	0.501	0.141	1
Regulation compliance ( $C_{12}$ )	0.500	0.141	2

### 4.3. Evaluating suppliers using modified COPRAS-G method

The weights derived from DANP are further incorporated in modified COPRAS-G analysis to

evaluate the degree of utility for each alternative. First, the performance values of each potential supplier ( $A_1$  to  $A_4$ ) are surveyed by managers. However, due to the vagueness or incomplete information possessed by each manager, the performances of alternatives are expressed as an interval, as indicated in Table 4. Then, following the steps of modified COPRAS-G as described in Section 3, we can calculate the grey gap of each alternative respective to each criterion. The results indicate how much gap of each alternative needs to improve to reach the aspiration level. The results indicate that modified COPRAS-G has more non-zero gaps for each supplier than that of original COPRAS-G. Combining the influential weights derived from DANP method and the modified COPRAS-G method, we can integrate the weights and performance values to obtain the final utility degree, as shown in Table 5. The analysed results reveal that the supplier  $A_2$  has the highest utility degree and should be chosen. Although the ranks in three methods show the same, their utility degrees are rather different. The new approach tells us even the  $A_2$  is the optimal green supplier, it still needs to improve 24.05% utility degree to reach the aspiration level but the original COPRAS-G and traditional grey relation methods do not.

**Table 4.** Performance values of potential green suppliers

Criteria	Weights (Global)	$A_1$	$A_2$	$A_3$	$A_4$
<b>Organisational (<math>D_1</math>)</b>					
Environmental ( $C_1$ )	0.066	(7.2-8.2)	(6.9-7.2)	(6.2-7.3)	(7.8-8.2)
Training ( $C_2$ )	0.068	(8.1-8.9)	(7.2-7.8)	(6.5-7.3)	(7.6-8.1)
Commitment ( $C_3$ )	0.059	(7.1-8.0)	(7.5-8.8)	(6.7-7.1)	(6.8-7.8)
<b>Operational (<math>D_2</math>)</b>					
Deceased toxic materials ( $C_4$ )	0.067	(7.2-7.6)	(7.5-8.2)	(6.4-7.4)	(7.0-7.5)
Pollution control ( $C_5$ )	0.070	(7.3-7.6)	(7.3-7.9)	(7.1-7.8)	(7.1-7.7)
Collaboration ( $C_6$ )	0.060	(7.1-7.7)	(6.8-7.3)	(6.1-6.8)	(7.3-8.0)
Cleaner technology ( $C_7$ )	0.069	(7.2-7.7)	(7.8-8.3)	(6.8-7.5)	(7.2-7.7)
<b>Product design (<math>D_3</math>)</b>					
Life cycle analysis ( $C_8$ )	0.091	(7.5-7.9)	(6.9-7.5)	(6.8-7.5)	(7.2-7.7)
Reduced consumption of materials/energy ( $C_9$ )	0.083	(7.0-7.6)	(7.8-8.4)	(7.5-8.4)	(7.5-8.0)
Reuse and recycling of materials and packaging ( $C_{10}$ )	0.084	(6.8-7.3)	(7.9-8.6)	(7.2-7.8)	(6.4-7.1)
<b>Compliance (<math>D_4</math>)</b>					
Green certification ( $C_{11}$ )	0.141	(8.0-8.5)	(8.4-8.7)	(7.2-8.2)	(7.6-8.6)
Regulation compliance ( $C_{12}$ )	0.141	(8.2-8.7)	(8.5-9.0)	(7.9-8.6)	(7.6-8.5)

**Table 5.** Results of GORPAS-G analysis for each alternative

	Utility degree (%)			
	$A_1$	$A_2$	$A_3$	$A_4$
New approach	71.92 (2)	75.95 (1)	66.05 (4)	69.40 (3)
Traditional approach	98.53 (2)	100.00 (1)	96.55 (4)	97.58 (3)
Original COPRAS-G	88.96 (2)	100.00 (1)	74.95 (4)	82.22 (3)

Note: The numbers in parentheses indicate the rank

## V. Discussions

The proposed hybrid model provides a systemic analytical model for the selection of green suppliers. Besides including multiple criteria, the model also considers the interdependencies among dimensions. To cope with the uncertainty of decision-makers, the model treats the performance values as an interval, which is a more reasonable representation of the real world. However, readers might

question why the DMATEL-based ANP (DANP) method did not consider this kind of uncertainty. The reasons are that we applied 0–4 scales in the DANP survey, not the 0–9 scales used in the traditional ANP method. The reduced scales produce a certain implied degree of vagueness in the collected data. Furthermore, the DANP survey discusses the influence degrees within criteria, making it easier to reach a consensus among managers than when using the performance value of the supplier. Another advantage of this model is that the INRM can point out the direction of improvement rather than just ranking the alternatives. For example, from the direction of influence within the dimensions (Fig. 2), we find that organisational management ( $D_1$ ) will affect the product design ( $D_3$ ) and compliance with regulations ( $D_4$ ). This information indicates that a firm should have good organisational management in order to produce qualified product design and meet government regulations and customer requirements. Also, from the subsystem of organisational management, commitment to GSCM by managers ( $C_3$ ) will influence environmental management ( $C_1$ ) and training related to green management ( $C_2$ ). The management implication is that a firm needs full support from managers to construct a strong organisational management.

In this study, all of the utility degree from COPRAS-G, traditional grey relation and our new approach indicate that green supplier  $A_2$  is the first choice for the case company, but their management implication is extremely different. Both the original COPRAS-G and traditional grey relation show the utility degree of  $A_2$  as 100%, but our new approach has only 75.95%. These results mean that  $A_2$  is already perfect in the original COPRAS-G and traditional grey relation methods, but our new approach shows that  $A_2$  still has 24.05% utility degree need to be improved. The ranks of the overall utility degree of the four green suppliers are found to be  $A_2 \succ A_1 \succ A_4 \succ A_3$ , where  $A \succ B$  represents that A is preferred to B. If we look at the performance values of the four suppliers (Table 6), there is not much difference in their green certification, since most of the potential green suppliers have passed the certification requirements of different international organizations. However, the performance value of commitment from the managers ( $C_3$ ) for GSCM show the following trend:  $A_2 \succ A_1 \succ A_4 \succ A_3$ , which is the same as the supplier's final utility degree. This result seems to imply that support from the managers is the key factor for a successful green supplier. This observation also confirms the above discussion that support from managers has the highest net degree of influence. Therefore, from the above discussion, it can be seen that the proposed model can help firms to find the cause and provide a direction for improvement.

## VI. Conclusions

This study uses a novel hybrid model to help firms select green suppliers. Data from a Taiwanese electronics company are used in the case study to demonstrate the feasibility of the proposed model. The proposed method derives the weights directly from the DEMATEL results, which can avoid the time-consuming pair-wise comparisons involved in traditional ANP analysis. The obtained weights, that treat each dimension with different degrees of influence, are more reasonable and consistent with the DEMATEL results. Combing the weights derived from DANP, we further applied the modified COPRAS-G to deal with the various opinions of the decision-makers. The proposed model is more reasonable since it reflects the real world situation more closely. Our analysis indicates that  $A_2$  has the



highest utility degree followed by  $A_4$ ,  $A_4$  and  $A_3$ . Unlike previous studies, our new method provides a way to improve the performance and points out the source factors, rather than just ranking the alternatives. Our results show that organisational management has the highest degree of influence on a firm's green product design and operational management. The support from managers is the key factor in organisational management. Comparing with the COPRAS-G and traditional grey relation methods, our new approach can be used to improve each criterion, dimension and overall in performance integration.

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# Technology Elasticity and Potential on Energy Saving & Emission Reduction for Different Industries: Evidence from China

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## **Abstract**

This paper investigates technology elasticity to energy saving or emission reduction among different industries in China for the period 2001 to 2011. Total-factor productivity growth, the common measure of technical progress, is divided into three parts with data envelopment analysis: frontier technology progress, technical efficiency relative to the frontier, and scale efficiency, which represent three kinds of technological progress. Chinese 37 industrial sectors are classified into three categories: labor-intensive, capital-intensive and resource-intensive. Our evidence demonstrates that technology plays different roles for different categories of industries in energy saving and emission reduction. Besides, each kind of industry has a most efficient choice of technical progress to improve efficiency.

**Keywords:** technology elasticity; efficiency of energy saving; efficiency of emission reduction

**Running Title:** Technology elasticity in energy saving & emission reduction

# **Corporate Social Responsibility and Accounting Credit**

## **- Based on the Case of Hainan Honz Pharmaceutical co.**

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### **Abstract**

Based on Chinese listed companies "Hainan Honz pharmaceutical co.", this paper analyzes the two conflict behavior: on the one hand, in 2008, it has been awarded "Excellent Enterprise" and "the most Responsible Enterprise in 30 years of reform and opening-up"; on the other hand, in 2014, it has been found guilty of financial fraud by China Securities Regulatory Commission in 2011 and 2012.

This paper investigated the cause of the separation of corporate social responsibility and accounting credit. We analyse the evaluation system of "the most Responsibility Enterprise" with the method of statistics and classification and also the influencing factors of performing corporate social responsibility. We found the core content of corporate social responsibility evaluation system and the relationship with accounting credit .

**Key words:** Corporate social responsibility; Accounting credit; Evaluation system of "the most Responsibility Enterprise"; Hainan Honz Pharmaceutical Co.,Ltd.;

### **I. Questions**

30 June 2014, Hainan Regulatory Authority of China Securities Regulatory Commission (hereinafter referred to as CSRC) made the decision that determining Hainan Honz Pharmaceutical Co., Ltd.'s (hereinafter referred to as HONZ) the illegal facts of financial fraud in 2011 and 2012. Hainan Regulatory Authority decided that HONZ shall be warned and imposed a fine of ¥350,000 and some executives were imposed fines of varying amounts. 7 March 2015, China Securities Times news:Because of inflating profits for two years, HONZ was filed a claim which is the first case in GEM listed company.

HONZ has been an excellent company which has a variety of honors such as "Excellent Enterprise" and "the most Responsible Enterprise in 30 years of reform and opening-up". And "the most Responsible Enterprise in 30 years of reform and opening-up" is 2008's award of the selection activity of "the most Responsible Enterprise" which is advocated by the government. But why did it have the behavior of financial fraud ? Why did corporate social responsibility(hereinafter referred to as CSR) and accounting credit separate? This paper aims to analysis the cause of these problems.

### **II. The case of Hainan Honz Pharmaceutical Co., Ltd.**

Company Name: Hainan Honz Pharmaceutical Co., Ltd.

Securities referred to:Honz Pharmaceutical; Stock Code:SZ300086 ;

Industry:pharmaceutical manufacturing

Listing Date:2010-05-26

**Table 1**

HONZ's major historical events and CSR performance

Year	Major Historical Events	CSR Performance	Honors
1994	incorporation		
2007	shareholding reform		China's outstanding brand of high-tech industry
▲2008	"the most Responsible Enterprise in 30 years of reform and opening-up" "Excellent Enterprise"	eight hundred thousand donations for the wenchuan earthquake	"the most Responsible Enterprise in 30 years of reform and opening-up" "Excellent Enterprise" "Hainan's most influential star industrial enterprises"
2009			"China's top venture enterprises" "Haikou's innovative enterprises"
2010	IPO	4.5 million donations for the Yushu earthquake and Wenchang rain disaster in Hainan	"China's top ten most growth enterprises"
▲2011	financial fraud	Red Face Fund was established Hainan Honz Pharmaceutical Co., Ltd donates one million in the first phase	
▲2012	financial fraud	Red Face Fund	
2013	investigated by CSRC	1.4 million donations for Ya'an earthquake and Puning flood Red Face Fund	
2014	punished by CSRC	Red Face Fund	

Source:Hainan Honz Pharmaceutical Co., Ltd of home page:<http://www.honz.com.cn/about/index.aspx>  
MenuId=020301

The following is the basic information of HONZ's case:

### 2.1 Developing History

2007,Shareholding reform; 2008, "the most Responsible Enterprise in 30 years of reform and opening-up"and"Excellent Enterprise"; 2009,"China's top venture enterprises" and "Haikou's innovative enterprise" ; 2010,IPO; 2011, financial fraud of inflating profits; 2012, financial fraud of inflating profits; 2014 punished by CSRC.

### 2.2 Charity<sup>1</sup>

Red Face Fund<sup>2</sup> which was established in 2011 has been committed to children's charities in national poverty county. HONZ had donated 16.7 million yuan in several major disasters during 2008-2013 in China.

### 2.3 Financial fraud

The following is the basic financial data<sup>3</sup> from 2008 to 2012:

<sup>1</sup> The information comes from Hainan Honz Pharmaceutical Co., Ltd company homepage.

<sup>2</sup> The Red Facefund: the Red Facespecial fund was established on September 23, 2011. The fund was seted up by the China children and teenagers' fund and Hainan Honz Pharmaceutical Co., Ltd. As the sponsor ,Hainan Honz Pharmaceutical Co., Ltd take the first donation of one million yuan RMB as start-up fund, and it also responed for the follow-up fouds. The Kang Zhi Red Face Fund purpose: committed to children's charities, take care of poor children grow, and offers a variety of forms of aid, promote social harmony and progress.

<sup>3</sup> The information comes from Hainan Honz Pharmaceutical Co., Ltd company homepage.

**Table 2**

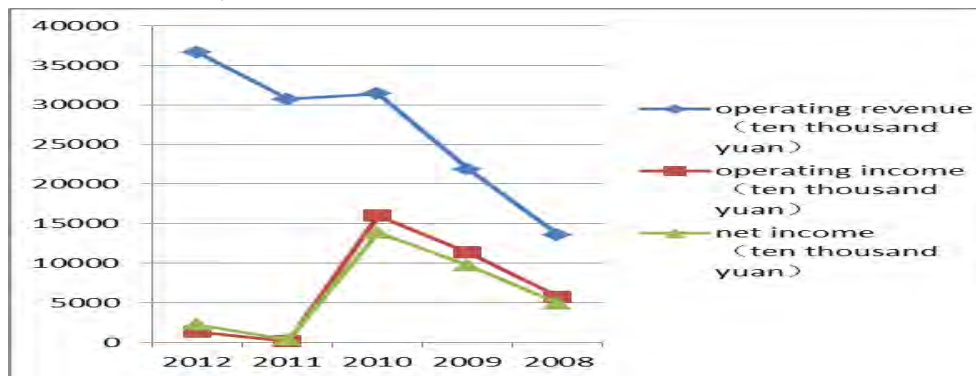
The finance data of Hainan Honz Pharmaceutical Co.,Ltd.from 2008 - 2012

Amount(ten thousand yuan)

	2012	2011	2010	2009	2008
<b>operating revenue</b>	36600	30700	31400	21900	13600
<b>operating income</b>	1382	188	16000	11400	5797
<b>net income</b>	2260	353	13900	9758	4952

**Figure 1.** plotting line graph Of Finance data of Hainan Honz Pharmaceutical Co.,Ltd.

Amount(ten thousand yuan)



Notes: Hainan Honz Pharmaceutical Co.,Ltd.IPO in 2010, financial data in 2009 and 2008 from the prospectus

**Table 3**

The finance data of Hainan Honz Pharmaceutical Co.,Ltd. from 2008 - 2012(out of financial fraud)

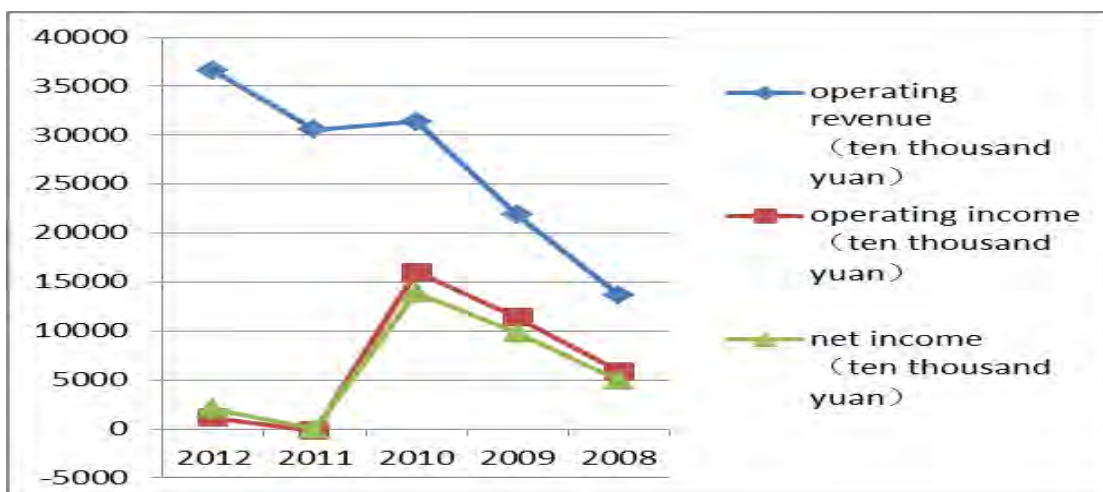
Amount(ten thousand yuan)

	2012	2011	2010	2009	2008
<b>operating revenue</b>	36600	30543	31400	21900	13600
<b>operating income</b>	1151	-207	16000	11400	5797
<b>net income</b>	2029	-42	13900	9758	4952

Note:In 2011, the sales of company's leading products rui zhi qingare was affected.

**Figure 2.** plotting line graph Of Finance data of Hainan Honz Pharmaceutical Co.,Ltd.

Amount(ten thousand yuan)



Notes: Hainan Honz Pharmaceutical Co.,Ltd.inflated gross revenue 157ten thousand and Lessed selling expenses 238 ten thousand in 2011; and Lessed selling expenses 231 ten thousand in 2012 .

The amount of HONZ company financial fraud<sup>4</sup> is 6.261 million yuan. In 2011, the amount of inflated profits is 3.953 million yuan including recognising sales revenue1.568 million yuan in advance and failing the accrued period charge 2.385 million yuan. In 2012, the amount of inflated profits is 2.308 million yuan because of failing the accrued period charge.

HONZ won many honorary titles, especially the honor of "the most Responsible Enterprise in 30 years of reform and opening-up" , this is a recognition from society and government.But why did such a good company have the behavior of financial fraud ? What is the influencing factor?

We will focus on the analysis about the selection activity of "the most Responsible Enterprise" and hope to find the answer.

### III. "The international BBS of China•CSR"

#### 3.1 Origin

"The international BBS of China•CSR(hereinafter referred to as BBS)" was set up in 2005. It aims to advocate the value of “responsibility create harmonization” and promote the spread of the concept of CSR in China. The BBS focuses on the quality, environmental protection and public welfare and it has selected “the most Responsible Enterprises” every year among the whole of China since 2005.So far, there have been more than one hundred enterprises including China Construction Bank, Lenovo and Ping An Of China obtained "the most Responsible Enterprise" . HONZ awarded “the most Responsible Enterprise" in 2008

#### 3.2 Organization

Guidance units: Ministry Of Commerce of the People’s Republic of China, State-owned Assets Supervision and Administration Commission of the State Council, State Administration for Industry & Commerce of the People’s Republic of China, General Administration of Quality Supervision, Inspection and Quarantine of the People’s Republic of China, State Administration of Work Safety, Overseas Chinese Affairs Office of the State Council, the Red Cross Society of China, China News Service.

#### 3.3 Sponsor

China News Weekly<sup>5</sup>, China Red Cross Foundation<sup>6</sup>

#### 3.4 Selection method

Organizing committee issues a set of evaluation index system every year and take synthesis method of information collection, data statistics, enterprise voluntary reporting, a public vote and

<sup>4</sup> China Securities Regulatory Commission:<http://www.gw.com.cn/news/news/2014/0701/200000358106.shtml>

<sup>5</sup> China News Weekly, sponsored by the China news service. China news editing and publication of "China news weekly" is one of the most well-known political magazine in China. China news agency referred to the China news service, a state news agency of the People's Republic of China. The China news service report the foreign business as its main news,the most of its service object are the people in Hong Kong and Macao compatriots, overseas Chinese, Taiwanese and foreign.

<sup>6</sup> The Chinese Red Cross foundation is directed by the head of the Red Cross society of China,and it has the independent legal person status of the national public offering foundation. The Chinese Red Cross foundation is led by the state council of the People's Republic of China.

peer-reviewed.

### 3.5 Effectation

The BBS convenes at the beginning of each year before the two sessions which are the National People's Congress and the Chinese people's political consultative conference(CPPCC). Along with the "China news weekly", the summary of results will be published and served two scene. so it is an important communication platform between government and enterprise. Meanwhile the international mainstream medias will be invited to participate in the BBS.

Obviously, the BBS's selection has great influence to the society. It is an incentive of government and society to promote CSR. The award of "the most Responsible Enterprise"has great influence to the HONZ. Then we will analyze the evaluation index system of "the most Responsible Enterprise" selection activity.

#### IV. The evaluation index system of "the most Responsible Enterprise" selection

We have investigated and researched the information of the selection activities from 2005 to 2014<sup>7</sup>, especially the online declaration index system which we called evaluation index system. And from that we got two stages of the evaluation<sup>8</sup>. The first stage is from 2005 to 2008 and we called System I. The second stage is from 2010 to 2013 and we call System II. We analyzed the characteristics of the selection of "the most Social Responsibility Enterprises" based on the comparison of System I and System II, and we got Table 4.

**Table 4**

the comparison table of System I and System II

Level indicators	Secondary indicators	System I	system II
<b>Basic situation</b>	business types and organizational forms	√	√
<b>Policy and Regulation</b>	the number of directors, independent directors and supervisors		√
	the committee in charge of CSR		√
<b>Strategic management system</b>	CSR system certification	√	
	participate in social CSR related associations	√	
	CSR department	√	
	CSR goals	√	
	CSR supervision and evaluation system	√	
	work record about CSR	√	
	CSR report	√	
	into the strategic planning and management system	√	√
<b>Economic performance</b>	performance indicators (revenue, cost and profit)	√	√
	pollutants' types and emissions	√	
	sewage charges	√	
	environmental staff	√	
	expenditure of pollution control and environmental subsidies	√	
	honorary titles on environmental protection	√	
	environmental penalties	√	
	measures to avoid or reduce environmental pollution	√	
	participation in social environmental projects	√	
	practices of innovative energy-saving and environmentally friendly	√	

<sup>7</sup> source :<http://finance.sina.com.cn/hy/20081027/15585434832.shtml> etc.

<sup>8</sup> the information was all collected apart from 2009 and 2014 .you can find the two phase analysis in table 1.



<b>Environmental performance</b>	development model		
	targets and execution of energy conservation and emissions reduction	√	√
	energy management goals		√
	target management and review		√
	energy management is up to standard		√
	centralized purchasing mechanism		√
	raw materials recycling mechanism		√
	management methods of water-saving		√
	management methods of wastewater's treatment and discharge		√
	EIA projects		√
	ISO14001		√
<b>Charity</b>	management methods of hazardous waste's transportation and disposal		√
	participate in direct public welfare activities	√	
	charitable donations behavior	√	
	measures to improve CSR environment	√	
	charity plan		√
<b>Labor Management</b>	management processes and policies of social donations		√
	medical services	√	
	facilities of food, accommodation and sanitation	√	
	prohibition of forced labor	√	
	child labor policy	√	√
	prohibition of discrimination	√	√
	collective bargaining	√	√
	reasonable working hours	√	√
	occupational disease	√	√
	production safety accident	√	√
	salary system	√	√
	dispatch employees equal pay		√
	staff training		√
retired staff management		√	
<b>creditors</b>	deceive and drag loan maliciously	√	
<b>Customer</b>	product quality and safety issues	√	
	marketing fraud	√	
	customer suggestions or complaints management mechanism		√
<b>Supplier</b>	payment policy	√	
	malicious fraud and deferred loan	√	
	promote upstream and downstream businesses perform CSR	U	
	promote and propagandize CSR	√	
	responsibility performance of the supplier		√
	contract terms about human rights		√
	supplier's regular third party audits		√
<b>Government</b>	tax law	√	√
	apply for government subsidies and national fund support		√
<b>Community</b>	management measures to protect and pacify residents and facilities		√
	encourage employees to participate in community service		√
<b>Anti-corruption</b>	anti-corruption policies and management practices		√
	number of corruption cases and treatment measures		√

source: Sina Finance:<http://finance.sina.com.cn>.

According to the analysis, we can make the conclusion:

4.1 The evaluation index system has been improved from stage one to two

There is no essential difference on evaluation content, but it reflects the wider range of CSR and more requirement of CSR institutionalization. In terms of the range, the System II increases the

responsibility of community and anti-corruption; In terms of institutionalization, System II require not only a behavior, but also the strategy and management system. For example, System II requires customer suggestions or complaints management mechanism in Customer management; charity plan, management processes and policies of social donations in Charity.

#### 4.2 The substance of the CSR is return to the society

This evaluation system emphasizes on the responsibility of the environment and charity except for the stakeholders (shareholders, employees, creditors, customers, suppliers, government, community). It is a system which encourages enterprises clearly to care about the disadvantaged groups, charities and environmental protection, that make enterprises feel the pressure of payment. Jian-rong Ma<sup>9</sup> (2008), director of Lenovo group LTD, pointed out that "sometimes, the media, the government, the enterprise and the social in China regarded CSR as a payment, one-way payment. However, CSR is not a simply pay-out and sacrifice".

#### 4.3 The requirement and guidance of government

The government has played a great role in the development of CSR in China. It reflected its own incentive target through the extensive publicity selection: enterprise should not only have good economic performance but also return to society. It is such a long-term and sustained guidance that makes enterprise feel the behavior of CSR is an important chance to shape social image. These requirements, especially charity become an important symbol of social image.

#### 4.4 The choice of enterprises

The International Accounting Standards requires faithful presentation and so does China's Accounting Standards. This is the basic professional ethics which we called accounting credit. Enterprises should know which is the basic one and make the choice in the case of difficulty, even though it is important for enterprises to shape social image and accounting credit. However HONZ care more about the government, social recognition and praise rather than accounting credit in its difficulties. The direct effect of the choice of HONZ is the separation of CSR and accounting credit.

### **V. Conclusion**

Accounting credit is the foundation of CSR, so CSR and accounting credit should be inseparable. Weiyang Zhang (2007), National School of Development at Peking University, proposed that the real responsibility of entrepreneurs should be create more value for customers, more job opportunities for people, and more taxes to the country on the basis of honest and trustworthy." But, nowadays the Chinese enterprise is forced to perform CSR because of the pressure of government and society, so they have no time and energy for accounting credit. On the other hand, they do care more about their own social image instead of their image of integrity. And it is easy to take the performance of CSR away from accounting credit.

The government and society should pay more attention to the establishment of CSR's foundation which is accounting credit. we need to re-clarify the concept, content and scope of the CSR, the government's role in the process of CSR. Think about how does the corporate really fulfill CSR voluntarily, and where does the power come from?

<sup>9</sup> The NO.3 Record of The International BBS of China • CSR. China News Weekly.

**Appendix A: list of “the most Responsible Enterprise” selection evaluation dimension analysis**  
**See Table A1**

**Table A1**

list of “the most Responsible Enterprise” selection evaluation dimension analysis

Dimension	2005	2006	2007	2008	2010	2011	2012	2013
Enterprises status	√	√	√	√	√	√	√	√
Environmental protection (Environmental performance)	√	√	√	√	√	√	√	√
Consumer rights (Customer management)	√	√	√	√	√	√	√	√
Corporate reputation	√	√	√	√				
Social activities (charity)	√	√	√	√	√	√	√	√
Taxation	√	√	√	√	√	√	√	√
Others	√	√	√	√	√	√	√	√
Policy and regulation					√	√	√	√
Economic performance					√	√	√	√
Labor management					√	√	√	√
Supplier management					√	√	√	√
Community impact					√	√	√	√
Anti-corruption-related					√	√	√	√

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2006:<http://finance.sina.com.cn/hy/20061016/16382990360.shtml>  
2007:<http://www.taodocs.com/p-8057102.html>  
2008:<http://finance.sina.com.cn/hy/20081027/15585434832.shtml>  
2010:<http://www.c-sr.net/CSRpjzz/>  
2011:[http://wenku.baidu.com/link?url=kr9u-A9bexYxx4qkV2JteE7bHljoV4XdbfYEHMapUkjraWJt8BG\\_VQdSISDnKQShxYJrV5UmUTo7Q3JBO8bxFflwTVywsL18Mnc2j1pZbBC](http://wenku.baidu.com/link?url=kr9u-A9bexYxx4qkV2JteE7bHljoV4XdbfYEHMapUkjraWJt8BG_VQdSISDnKQShxYJrV5UmUTo7Q3JBO8bxFflwTVywsL18Mnc2j1pZbBC)  
2012:<http://www.inewsweek.cn>  
2013:<http://search.inewsweek.cn/cse/search?s=14582186767852233223&entry=1&q=%E7%94%B3%E6%8A%A5%E8%B5%84%E6%96%99>

海月的翻译:

1、语句翻译: 我们可以看到, 这是一个由政府主导的长期持续的评选活动, 其目的是鼓励企业在环保、公益方面的行为。从结果上看, 该活动形成的强大社会舆论导向, 的确大大地影响了企业履行社会责任的行为。

2、关键词: 政府引导 评选活动 评价指标体系

It is obvious that this is a continuous government-leading selection event. The purpose of this event is to encourage firms more involved in environmental protection and public wealth. As a result, this event strongly directed the social media and affected firms' behavior in performing social responsibility.

Keywords: Government-leading Selection Evaluation Indicator System

# Trust Evaluation of Service Providers in E-commerce Multi-agent Environments

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## Abstract

This paper aims to enhance trust in e-commerce multi-agent environments by presenting a trust model, named 2RC, to select the most trustworthy service provider based on computing Reputation, Risk, and Conflict of service providers. Before proposing a computational trust model, the most representative trust models in e-commerce multi-agent systems were analyzed. According to this analysis, 2RC model identifies three vital components for trust evaluation of service providers and then it computes these components as; reputation of service provider agents, risk of interaction with provider agents, and conflict in previous behaviors of provider agents. Ultimately, 2RC presents a method for selecting the most trustworthy service provider agent by using TOPSIS method. The experimental results in defense of our proposed model are provided by simulating multi-agent environment consisting of various numbers of service providers. The performance of 2RC in the simulated multi-agent environment is compared with three related trust models. The experimental results indicate that the performance of 2RC is significantly better than other compared models, therefore 2RC is capable of selecting the trustworthy service provider agent more appropriately than other trust models. We believe that 2RC is beneficial to enhance the safety of online transaction in e-commerce-multi-agent environments.

**Keywords:** Conflict, E-commerce Multi-agent Systems, Reputation, Risk, Service Provider, Trust model

## The Entrepreneurial Competencies of Female-Owned Enterprises

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### Abstract

A country needs more entrepreneurs to rise small medium enterprises growth, one of which is the contribution of female entrepreneurs. Female's business ownership has increased significantly. This study is offer a comprehensive analysis of the competencies of female entrepreneurs, by identifying four key groups of competencies. We use the FEC framework (Female Entrepreneur Competence) generated by this research can be used to support female entrepreneurs in the self assesment of their competencies. Four main clusters of competencies were identified: personal and relationship, business and management, entrepreneurial, and human relations competencies. Qualitative research was conducted to generate a greater understanding of how female entrepreneurs developing their entrepreneurial competencies. The result showed that female entrepreneurs have the competencies for entrepreneurship especially personal and relationship and human relation competencies. Suggestions were provided for further research of female entrepreneurs and entrepreneurial competencies.

**Keywords:** Female Entrepreneurs, Entrepreneurial Competencies, FEC framework

# **The Role of Internal Audit Function in Public Sector Governance: The Case of Amhara Regional State, Ethiopia**

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## **Abstract**

A healthy constructed internal audit function can play a vital role in the governance and accountability process of public sector institutions through their assessments on the effectiveness of key organizational controls, governance and risk management processes. The purpose of this study is to examine the role of internal audit function in public sector governance and challenges that have an effect on this function the case of Amhara National Regional State public sector. Structured questionnaire survey of all internal audit directors and staff from 35 public sector bureau of Amhara National Regional State, a total of 61 internal auditors was used. To analyze the data, OLS multiple regression statistical method was employed. OLS regression analysis results show that risk management role of internal audit function is positively related to compliance with professional audit standards, unrestricted access, formal mandate, top management support, and competent leadership, and negatively related to organizational independence, competent staff and sufficient funding. The finding reveals that competent staff, compliance with professional audit standards, and sufficient funding is positively related with the control function of internal audit. The regression results also suggest that governance process role of internal audit function is positively related to competent staff and compliance with professional audit standards, and negatively related to top management support, formal mandate, and unrestricted access. The study concludes that policy makers and regulators and all other parties related to internal audit function in the public sector that needs the services of internal audit to be effective and efficient should give emphasis on the value adding role of its function in the public sector through risk management, control and governance processes.

**Key words:** Internal auditing, role of internal audit function, public sector governance, Ethiopia

# Effects of Board Reforms on Capital Structure and Corporate Growth Strategy

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## Abstract

Debt-ridden corporate growth and increased vulnerability was one of the causes of the 1997 financial crisis in Korea. Introduction of outside director system has been the core part of the corporate reforms following the crisis. Our estimation using instruments obtained from a natural experiment illustrates that outside monitoring has (i) improved capital structure of firms even when we control for the leverage regulation effect (ii) enhanced compliance with leverage regulation and thus reduce business risks and (iii) reduced excessive growth and excessive investment more consistently for top 10 largest chaebol than stand-alone firms and smaller sized chaebol affiliates. Our results shed some lights on why existing studies report the positive effect of outsiders on firm value.

**Keywords:** Outside director, Corporate governance, Capital structure, Growth Strategy, Government regulation, Chaebol

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# The Value of Financial and Non-Financial Information in Japanese SMEs Risk Assessment

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## Abstract

The purpose of this study is to investigate indicators needed for credit risk measurement for Japanese SMEs, using financial information, as well as corporate information of a large SMEs database. Since this data include non-financial information with categorical data, the author applies a multinomial logit regression analysis to develop the model. The analyses in this study show that not only financial information but non-financial information is the valuable source for a SMEs risk assessment. Sales (log), internal reserves to total assets ratio, ROA, interest coverage ratio, debt to equity ratio, and operating profit to sales ratio are statistically positive and significant financial ratio. Firms which do not own real estates are statistically significantly positive.

**Keywords:** credit risk assessment, SMEs, multinomial logistic regression model, financial information, non-financial information

## I. Introduction

More than 99% of all businesses in Japan are small or medium-sized enterprises (SMEs); they also employ a majority of the working population and account for a large proportion of economic output (METI, 2014). Altman and Sabato (2007) found that small and medium sized enterprises of the US are significantly different from large corporates from a credit risk point of view. Especially, SMEs rarely provide reliable financial data so that they are informationally opaque. SMEs often depend on financial institutions for external funding, since they simply do not have access to public capital markets (Berger and Udell, 2002). Thus, commitment to credit risk management is an essential component of a comprehensive technique to risk management and critical to the long-term success to all banking institutions. The recent literature on small and medium- sized enterprises (SMEs) lending emphasizes that commercial lenders can draw on alternative lending technologies in extending credit to SMEs based on soft information and hard information (Berger and Udell, 2002, 2005).

In this paper, the author analyzes the nature and effects of financial and non-financial data in credit risk modeling, using a large SMEs database in Japan. This paper is organized as follows. Following the introduction on Section 1, Section 2 presents literature review on SMEs credit risk assessment. Section 3

describes the data and variables. Section 4 presents analytical method. Section 5 presents the result of analysis. Finally, summary of research results and future study are discussed in Section 6.

## II. Literature

Using data from the Federal Reserve Board's 1993, 1998 and 2003 Surveys of Small Business Finances (SSBFs), the issue of availability of credit to small business has been studied. Petersen and Rajan (1994) analyze credit availability using data from 1987 SSBF, and found firms with stronger relationships with their prospective lenders are more likely to receive credit, and close ties with creditors lead to greater availability of credit at lower rates of interest. Also using 1987 SSBF data, Berger and Udell (1995) find loan rates are lower when firms have longer pre-existing relationships. Cole (1998) finds the length of the firm-lender relationship that affects the likelihood a lender will extend credit through the 1993 SSBF. Chakraborty and Hu (2006) also use the 1993 SSBF data to analyze how relationships affect lender's decision to secure lines of credit and other types of loans.

The importance of bank relationships to small businesses in terms of both credit availability and credit terms such as loan interest rates and collateral requirements have been supported by several empirical studies (e.g., Petersen and Rajan, 1994, 1995; Berger and Udell, 1995; Cole, 1998; Elsas and Krahn, 1998; Harhoff and Körting 1998a). Kirschenmann(2011) study credit rationing in small business bank relationships in one Bulgarian bank by using a data set of matched loan application and loan contract information, and find that credit rationing is considerable and most pronounced for opaque borrowers in the beginning of bank relationships, but is resolved with decreasing informational asymmetries over the bank relationship.

In a study of bank-borrower relationship for SMEs in Japan, Kano et al. (2011) suggest that relationship strength matters most when firms are less transparent (i.e., do not have audited financial statements), which implies that relationship lending and financial statement lending are distinct lending technologies for Japanese SMEs. Using a postal survey data conducted in the small business district area in Japan by the local government office in August 1998, Kutsuna and Cowling (2003) find that probability of loan approval is positively associated with employment size of small businesses, loan requests made to governmental financial institutions for small businesses, and for investment in fixed assets. Hatsumi et al. (2011) use datasets from firm surveys conducted by the Research Institute of Economy, Trade, and Industry (RIETI) during 2008-2009, to examine the ex-post performance of SMEs that obtained small business credit scoring (SBCS) loans. They find that the ex-post probability of default after the SBCS loan was provided significantly increased for SMEs that obtained an SBCS loan from a transactional lender. They also find that the lending attitude of relationship lenders in the midst of the recent global financial crisis became much more severe if a transactional lender had extended an SBCS loan to a firm. These findings suggest that SBCS loans by a transactional lender are detrimental to a relationship lender's incentive to monitor SMEs and maintain relationships.

Miyamoto (2014) investigates indicators needed for credit risk measurement for a small bank, using both financial and non-financial dataset consists of nearly 4,955 loans to individual entrepreneurs and small enterprises extended by one bank located in the provincial city of Japan over the period 2002 to 2004. The results show both

financial information and non-financial information are valuable sources for credit risk assessment for both small enterprises and individual entrepreneurs which are majority of the small bank are lending customers.

### III. Data

In this paper, the author analyzes credit risk assessment by using both financial and non-financial dataset consists of nearly 135,000 Japanese SMEs collected by credit guarantee corporations, as well as government-affiliated and private financial institutions involving SME business in 2010. Definitions of SME varies among different countries. SMEs in Japan are defined under Article 2, Paragraph 1 of the Small and Medium-sized Enterprise Basic Act, and the term “small enterprises” is defined under Article 2, Paragraph 5 of said act. According to these definitions, most companies in this research are considered as SMEs. The data provides information on each firm’s balance sheet and income statement; its default information; the firm’s characteristics, including industrial classification, and demographic characteristics of each firm’s primary owner, including age, real estate ownership, whether he/she has a successor or not. Table 1 shows description of variables in this study.

### VI. Multinomial Logistic Regression Model

The purpose of this paper is to analyze a set of financial ratios and non-financial information linked to SMEs to find out which are the most predictive variables affecting an entities’ credit worthiness. Since this data include non-financial information with categorical data, the author applies a multinomial logit regression analysis to develop the model. As for financial ratios, the author extensively analyzes a selected number of relevant financial measures suggested by previous literatures (Edmister 1972, Altman and Hotchkiss 2006, Altman and Sabato 2007) in order to select the most predictive ones. Then, these variables, along with non-financial variables, are used as predictors of the default event.

Multiple discriminant analysis and logit regression are the traditionally preferred statistical techniques for credit risk modeling, and logistic regression can be extended to handle responses that are polytomous, *i.e.* taking more than two categories. Multinomial logistic regression is used to predict categorical placement in or the probability of category membership on a dependent variable based on multiple independent variables. The independent variables can be either dichotomous (*i.e.*, binary) or continuous (*i.e.*, interval or ratio in scale). Like binary logistic regression, multinomial logistic regression uses maximum likelihood estimation to evaluate the probability of categorical membership. The simplest form of the multinomial logistic regression model involves one categorical dependent variable  $Y$  (*e.g.*, three levels of behavioral risk) and one explanatory variable,  $X$  (*e.g.*, default risk). Let  $p_1$ = the probability of high behavioral risk ( $Y=3$ ),  $p_2$ = the probability of medium behavioral risk ( $Y=2$ ), and  $p_3$ = the probability of low behavioral risk ( $Y=1$ ). The simplistic multinomial logistic regression model relates the log of odds (or logit) of  $Y$  to the explanatory variable,  $X$ , in a linear form, as follows:

$$\log \frac{\Pr(Y=j)}{\Pr(Y=j')} = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k \quad (1)$$

where  $j$  is the identified behavioral risk  
and  $j'$  is the reference behavioral risk

**Table 1**  
**Description of Variables**

	N	Minimum	Maximum	Mean	Std. Deviation
Years since established	134,552	1	145	14.78	16.532
Real estate owned	135,743	0	1	.79	.408
CEO	135,743	59	80	60.70	4.058
Default	135,743	0	1	.05	.209
Sales(log)	135,525	-1.20	2.08	1.5869	.11879
Internal reserves to total assets ratio	135,743	-8.58	2.03	-.0338	.69853
ROA	135,743	-2.57	2.99	.5569	.74041
The cash equivalent total assets ratio	135,743	-1.09	1.00	.7929	.12958
Net profit margin	135,525	-10.81	1.98	-.0273	.68464
Interest Coverage Ratio	129,020	-16.14	18.45	.0144	1.49797
Debt to Equity ratio	135,743	0.00	14.04	1.0026	.08500
Ratio of current expense to current income (log)	135,547	-2.75	2.63	.0388	.14454
Operating profit to Asset ratio	135,743	-8.97	1.65	-.0568	.74208
Operating profit to Sales ratio	135,536	-12.64	11.85	-.0396	.80279
Fixed long term conformity rate	135,708	0.00	8.65	.8767	.14589
Quick assets to liquid assets ratio	135,732	-2.33	3.63	1.8713	.50842
Mining and quarrying	135,743	0	1	.00	.039
Manufacturing	135,743	0	1	.00	.028
Electricity gas steam and air conditioning supply	135,743	0	1	.00	.044
Water supply sewerage waste management and remediation activities	135,743	0	1	.19	.389
Construction	135,743	0	1	.19	.389
Wholesale and retail trade; repair of motor vehicles and motorcycles	135,743	0	1	.00	.032
Transportation and storage	135,743	0	1	.05	.215
Accommodation and food service activities	135,743	0	1	.01	.108
Information and communication	135,743	0	1	.31	.462
Real estate activities	135,743	0	1	.03	.173
Professional scientific and technical activities	135,743	0	1	.04	.189
Administrative and support service activities	135,743	0	1	.02	.132
Public administration and defence; compulsory social security	135,743	0	1	.01	.075
Education	135,743	0	1	.00	.003
Human health and social work activities	135,743	0	1	.16	.365

#### IV. Results

The results of analyses are shown in Table 2.

As for financial variables, sales (log), internal reserves to total assets ratio, ROA, interest coverage ratio, debt to equity ratio, and operating profit to sales ratio are statistically positive and significant. Other financial ratios are negative and significant. As for non-financial variables, years since established for 12, 13, over 115 years are negative, while other years are positive; however, none of them are statistically significant. Firms which do not own real estates are statistically significantly positive. Ages of CEO are negative, but statistically not significant. Any corporations do not have successors are statistically positive and significant. Among industries, manufacturing, electricity gas steam and air conditioning supply, water supply, transportation and storage, accommodation and food service activities, information and communication, professional scientific and technical activities are positive and significant.

**Table 2**

**The results of analyses (dependent variable = default)** \*Significant at 0.10, \*\*Significant at 0.05, \*\*\*Significant at 0.01

Variables		Parameter Estimate	Odds Ratio	95% Conf. Interval
Intercept		-10.3288		
Sales(log)		1.5041***	4.5	3.297 ~6.143
Internal reserves to total assets ratio		1.6453***	5.183	3.673 ~7.313
ROA		0.3094***	1.363	1.235 ~1.504
The cash equivalent total assets ratio		-3.4064***	0.033	0.027 ~0.04
Net profit margin		-2.5005***	0.082	0.058 ~0.115
Interest Coverage Ratio		0.0853***	1.089	1.045 ~1.135
Debt to Equity ratio		3.1678***	23.754	15.406 ~36.626
Ratio of current expense to current income		0.3587***	1.432	1.192 ~1.719
Operating profit to Asset ratio		-0.2449***	0.783	0.713 ~0.859
Operating profit to Sales ratio		0.2747***	1.316	1.234 ~1.404
Fixed long term conformity rate		-0.5203***	0.594	0.47 ~0.752
Quick assets to liquid assets ratio		-0.3095***	0.734	0.685 ~0.786
Years since established	1	4.1722	64.86	<0.001 ~>999.999
Years since established	2	4.0229	55.86	<0.001 ~>999.999
Years since established	3	4.1535	63.658	<0.001 ~>999.999
Years since established	4	4.1266	61.967	<0.001 ~>999.999
Years since established	5	4.1403	62.822	<0.001 ~>999.999
Years since established	6	4.1823	65.513	<0.001 ~>999.999
Years since established	7	4.0729	58.724	<0.001 ~>999.999
Years since established	8	4.7416	114.618	<0.001 ~>999.999
Years since established	9	3.8793	48.391	<0.001 ~>999.999
Years since established	11	4.6741	107.133	<0.001 ~>999.999
Years since established	12	-4.4372	0.012	<0.001 ~>999.999
Years since established	13	-4.4104	0.012	<0.001 ~>999.999
Years since established	15	4.2022	66.831	<0.001 ~>999.999
Years since established	25	4.1048	60.628	<0.001 ~>999.999
Years since established	35	4.1925	66.189	<0.001 ~>999.999
Years since established	45	4.1075	60.797	<0.001 ~>999.999
Years since established	55	4.0993	60.297	<0.001 ~>999.999
Years since established	65	4.2399	69.4	<0.001 ~>999.999
Years since established	75	4.0069	54.976	<0.001 ~>999.999
Years since established	85	4.334	76.25	<0.001 ~>999.999
Years since established	95	3.8208	45.639	<0.001 ~>999.999
Years since established	115	-4.4579	0.012	<0.001 ~>999.999
Years since established	125	-4.6902	0.009	<0.001 ~>999.999
Years since established	135	-4.4265	0.012	<0.001 ~>999.999
Real estate owned	No	0.2633***	1.301	1.22 ~1.388
Age of CEO	Under 59	-0.0512	0.95	0.773 ~1.168
Age of CEO	60~69	-0.00573	0.994	0.807 ~1.226
Age of CEO	70~79	-0.0296	0.971	0.778 ~1.211
Have a successor	No	0.2397***	1.271	1.2 ~1.346
Mining and quarrying		0.187	1.206	0.372 ~3.909
Manufacturing		1.032*	2.807	0.985 ~7.999
Electricity gas steam and air conditioning supply		0.8376*	2.311	0.872 ~6.124
Water supply sewerage waste management and remediation activities		1.0031***	2.727	1.28 ~5.809
Construction		0.6928*	1.999	0.938 ~4.263
Wholesale and retail trade; repair of motor vehicles and motorcycles		-0.7288	0.482	0.058 ~4.018
Transportation and storage		0.8481**	2.335	1.088 ~5.011
Accommodation and food service activities		0.9323**	2.54	1.153 ~5.595
Information and communication		0.6719*	1.958	0.92 ~4.169
Real estate activities		0.4321	1.54	0.711 ~3.336
Professional scientific and technical activities		0.7675**	2.154	1.004 ~4.625
Administrative and support service activities		-0.1885	0.828	0.362 ~1.895
Public administration and defence; compulsory social security		0.4204	1.523	0.653 ~3.548
Education		-9.2569	<0.001	<0.001 ~>999.999
Human health and social work activities		0.6022	1.826	0.856 ~3.895

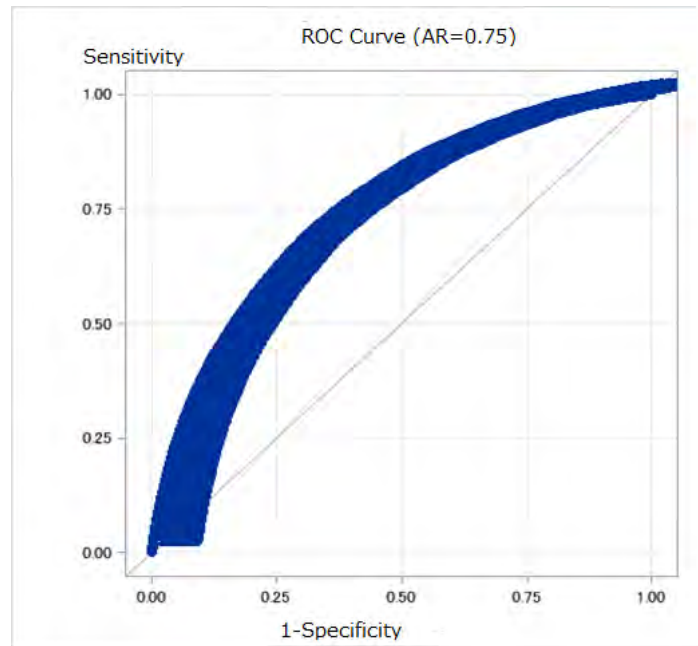


Figure 1. ROC Curve

In order to evaluate credit risk model, ROC (Receiver Operating Characteristic) analyses are used (Irwin and Irwin 2012). ROC curve is at the left end and the closer the ROC curve's position is to the point (0, 1). Similarly, the model is the better the larger the area under the ROC curve is (BCBS 2005). The ROC curve for Japanese SMEs in this study is shown in figure 1.

Accuracy Ratio (AR; exactly equivalent to the Gini coefficient) measures the trade-off between the selection rates of "Goods" and that of "Bads". If the score model is random, at any given cut-off, the proportion of goods passing the cutoff will be the same as the proportion of bads. This would give an AR of 0%. On the other hand, with a perfect scorecard, it would be possible to select all of the goods (100%) and none of the bads (0%). The resulting AR would be 100%. Practical experience shows that the Accuracy Ratio (AR) has tendency to take values in the range of 50% and 80%. AR for this analysis is 0.75.

## VI. Conclusions and Further Study

The purpose of this study is to investigate indicators needed for credit risk measurement for the SMEs in Japan, using financial information, as well as corporate information by using a multinomial logistic regression model. The analyses in this study show that not only financial information but non-financial information is the valuable source for a SMEs risk assessment. This data contain limited non-financial information, and what kind of non-financial data would be suitable to estimate credit risk assessment will be sought in a future study.

## VII. Acknowledgement

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## Consumers education program to share smart consumers

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### Abstract

The era of globalization and free trade made many emerging kinds of products or services being marketed to consumers. Carefulness in selecting the desired product causes the consumer in weak position compared to marketer. Low consumer education make teenagers didn't aware about there consumer right. Therefore, it will be needed consumer rights and obligations that are enjoyable and instructive for the community. As consumer, adolescents are vulnerable in term of identity confusion. The adolescents are heavily influenced by their peer group. Based on the background, an innovative educational games was created, namely "Pro SmartCon ". In addition, the game also made in the form of android-based software and hard copy. The programs are socialization and demonstration of Pro SmartCon, gaming, training of trainers, visits to the department of family and consumer sciences, photography competition and consumer jingle arrangement competition, inspiring stories contest, practices of consumer rights and responsibilities, national consumer day celebration, intelligent consumer action movement (campaign), Socialization the programs to authors KKP, festivals and consumer ambassador selection, family and consumer day seminar, education broadcast on the radio, and publications of smart consumer movement in social media. Result of the programs showed that Pro SmartCon increase the knowledge of consumer right and consumer protection law from 15% become 85%.

### I. Introduction

Consumers are the users, customers, and the final decision makers of a product (Sumarwan 2011). Consumers should always be careful and critical of the attributes product to be consumed. Mostly of cases concerning the circulation of products with attributes incomplete, BPOM July-August 2012 showed as many 33 149 illegal packaging, expired and damaged in food products, and cosmetic products amounted to 66 720 including packaging illegal. The era of globalization and free trade, the Asia-Pacific Economic Corporation (APEC), many emerging kinds of goods or services that are marketed to consumers (Anonymous 2013). If not careful in choosing a product, then consumers will be harmed.

The existence of a free market is used by businesses, the economic principle of business is profit much as possible and a minimum capital. The phenomenon can make the position of businesses and consumers become unbalanced and consumers are in a disadvantaged position (Nurhayati 2011). The main factor consumer weakness is low consumer awareness of their rights . It is caused by low consumer education (Kurniawan 2012).

Applicability of the law consumer protection (UUPK) No. 8 of 1999 as a strong legal foundation in protecting consumers through empowerment and education of consumers, since April 2000, the consumer should no longer be the injured and should be protected (Sudaryatmo 2008). However, there are still many Indonesian people who do not know the rights and obligations of the consumer. Data of the National Consumer Protection (BPKN) showed as many 62 percent of Indonesian people who do not know the rights of consumers (Nurhayat 2013). Based on the research results Mediani (2014) showed as many 70 percent of consumers are not accustomed to reading labels on product packaging and only 22 percent of consumers know the rights and obligations of consumers.

Looking at the problems, consumers need to information regarding the knowledge of the importance of the quality products and to be consulted to obtain rights as a consumer. Therefore, need for recognition of rights and obligations of consumers through a fun and educational program to consumers early age. PRO SMARTCON is a program created to introduce concept of the rights and obligations of consumers. This programs are direct activities and participation activities. In addition, the game also made in the form of android-based software and hard copy.

### **Purpose**

1. Increase the insight and knowledge of the consumer in choosing a product to be consumed.
2. Improving consumer knowledge about safety standards atributs products on the market.
3. Improving consumer knowledge of consumer rights protection and obligations.
4. Campaigning smart consumer education to the community.
5. Give alternative fun game to create an intelligent consumer.

## **II. Literature Reviews**

### **Consumer behaviour**

It is study of the processes involved when individuals or group select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires (Solomom 2007). Consumer behavior is the study of individuals, groups, or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society (Hawkins, Best, dan Coney 2001). Consumer behavior may be defined as decision process and physical activity individuals engage in when evaluating, acquiring, using or disposing of good and services (David L, Loudon, Albert J. Della Bitta 1984). Law consumer right and consumer protection no 8 year 1999, the consumer right are he right to safety, get to information about the product, the right to selection product, the right to complain, right to get advocacy, the right to receive guidance, the right to get complete information, as well as the right to ask for compensation.

### **Adolescent**

Adolescence is uniquely experienced within individuals even of similar chronological age. The physical onset of puberty is not the same for all adolescents. Adolescence may begin as early as age 9 for some girls, or as late as age 13 for others. Thus the physical experiences of these individuals will vary greatly, as will their

social experiences. Girls who mature earlier than their peers often begin “adolescence” looking older than their chronological age (Kaplan 2004). Teenagers are vulnerable period because individual at the time entered the stage identity confusion. At this time, adolescents are affected by peer group intended (Megawangi 2007).

### III. Method

Method in activities are socialization, demonstration games, Training of Trainer and campaign. This programs are direct activities and participation activities: **Direct activities:** The programs are socialization and demonstration of Pro SmartCon, games, training of trainers, visits to department of family and consumer sciences, photography competition and consumer jingle arrangement competition, inspiring stories contest, practices of consumer rights and responsibilities, intelligent consumer action movement (campaign), Socialization the programs to authors KKP, festivals and consumer ambassador selection, education broadcast on the radio, and publications of smart consumer movement in social media. **Participation activities:** national consumer day celebration and family and consumer day seminar.

Sample in programs are adolescent at SMAN 1 DRAMAGA Bogor. Sample in activities are 43 adolescent. Pro smartcon programs starts from February until may 2014. Learning the programs indoor and outdoor class.

### IV. Results

#### 1. Direct Activities

##### a. Pre and post test

This activity is the give questionnaires filled out by the participants. The Questionnaires of basic skills, comprehension and reading skills products, understanding of product labels, law consumer protection and institutions as well as an understanding of rights and consumer obligations. Indicators of success this activity is increasing cognitive abilities of participants on smart consumer information. Based on the results of pre-test as much as 70 percent of respondents already understand and know about the product label, but only 15 per cent respondents understanding of the rights and obligations of consumers law and consumer protection. Based on the post test results show going increased knowledge of respondents from 15 percent to 85 percent concerning the rights and obligations of consumers and law and protection

##### b. Socialization and demonstration of Pro SmartCon

This activity in the form of socialization with watching education video, learning from slides, modules and leaflets on the definition of a smart consumer, product labeling and the introduction of rights and consumer obligations. Indicator the success of activities is the main achievement of program Pro Smartcon and insight about information rights and obligations consumers. The output this activity is authors know the definition smart consumers, being able to read product labels and know the rights and consumer obligations.

##### c. Socialization and demonstration of gaming Pro SmartCon

This activity in the form of counseling to introduce the concept of rights and obligations of consumers with Pro Smartcon game. This game consists of two types of hardcopy and software based on Android. After that, rules explained game, how to play and determining the winners. Indicator of this activities is the target can apply message Pro Smartcon game. The output this activity is the authors able to apply the concept of the rights and obligations of consumers through such games.

**d. Training of trainers**

This activity is a demonstration and give educational games about the concept of rights and obligations smart consumer to another school Dramaga, teachers, and students in an effort to sustainability of the program. Indicator of the activities is the introduction of the concept rights and obligations consumers through ProSmarcon game. Output of this activity is to spread information about the concept of smart consumer.



**e. Visits to the department of family and consumer sciences**

This activity is a visit to Department of Family and Consumer Sciences (IKK), explanation of utilization customer service facilities. Indicators of activity is increasing knowledge authors about the consumer, the achievement awareness of the importance of rights and consumer obligations , and know the steps to the complaint if got a product that does not fit. Output of activity is authors able to mention the service consumer complaint if consumer feel aggrieved.



**f. Photography competition and consumer jingle arrangement competition**

This activity is a competition between the participants. In the event all participants create creative ideas in shape visual or audio. Indicator success of activities a spread to smart consumers.

**g. Inspiring stories contest**

This activity is a competition between participants. Authors writing good or bad experiences in bought product. The story can give information experiences authors in buy product. Indicators of the success of this event was the target can be understand the concept of rights and obligations as a smart consumer. Output this activity is the authors is able to write experience in essay writing.

**h. Practices of consumer rights and responsibilities**

This activity is a simulation of the action and counseling. this practice performed by an action games. Authors were given money by a certain amount, then money used to buy a wide range of products within a certain time. Authors required to make a shopping list and making of budget expenditure. Student presented the reasons to buy these products, and then description of the message of games and review of material rights and obligations consumer as well as the stages in shopping. Indicators of the success of activity is the target get information about product attributes, shopping and tricks a better understanding of concept rights and obligations of consumers.



**i. Intelligent consumer action movement (campaign)**

This activity in the form of the action on the road, This acts of education and introducing concept the smart consumer conducted by candidate consumer ambassadors to the community. The success indicator is students are able to apply and educating the general public about the concept smart consumers

**j. Socialization the programs to authors KKP**

These activities give learning the smart consumer and the introduction of the game Smartcon to student KKP IPB, in an effort sustainability program used as one of the empowerment program. Indicators of Success is introduce the programs to authors KKP.

**k. Festivals and consumer ambassador selection**

This activity is Closing of a series of activities Pro Smartcon in SMAN 1 Dramaga. Ambassador selection consumers with judge education and action program who have performed by each nomination in the form presentation. The output of this activity, election ambassador smart consumers and able to empower the community as sustainability efforts of this program.

**l. Education broadcast on the radio and publications of smart consumer movement in social media**

This activity provides an introduction Pro Smartcon and information program about consumers. this activity held on May 23, 2014 in the Studio RRI Bogor. Indicators of success This activity provides information and consumers around the Pro Smartcon to the general public.

**m. Monitoring and evaluation.**

This activity is conducted to see the effectiveness and efficiency of the circuit each activity in achieving the ultimate goal and the target output of the program by filling the questionnaire post test. Indicators of the success of this activity existence of the data evaluation and monitoring program as repair materials for the next program. Monitoring carried out once a month ambassador to the consumer.

**2. Partisipation Activities**

**a. National consumer day celebration**

This activity is a visit to Jakarta in commemoration of the day consumers organized by the ministry of trade of Indonesia. Indicators of success of this activity is that students are aware of the importance of Smart consumer movement that understands consumer protection and students gain new information smart consumer.

**b. Family and consumer day seminar**

This activity is a visit to the IPB students to participate in Family and Consumer Day seminar held by HIMAIKO. Indicators of success of these activities is increasing students' knowledge of smart consumer.

**3. Teamwork**

Teamwork in activities are ministry trading, HIMAIKO IPB Club, Departement Family and Consumer Sciences (IKK) IPB and Radio Republik Indonesia (RRI).

**4. Copyright**

Games Pro Smarcon have a number copyright C00201402566

**V. Discussion**

Outcome from Pro Smartcon Programs are showed the increased knowledge respondents from 15 percent to 85 percent of the rights and obligations consumers and law consumer protection. Increased knowledge of respondents from 60 percent to 87 percent regarding product attributes. Pro Smartcon programs are education consumer with sample adolescence, the programs success give education to sample. Example, sample became more careful in shopping, remember to family and friend about consumer right, and always compliant if lose out.

The Pro Smartcon game a good education media, the game give perhaps to explain about consumer right, law consumer and obigation consumer.

## VI. Conclusions

Based on the evaluation through pre and post test showed happen increased knowledge of respondents from 15 percent to 85 percent of the rights and obligations consumers and law consumer protection. Increased knowledge of respondents from 60 percent to 87 percent regarding product attributes. Meanwhile, after the education program Pro Smartcon respondents became more careful in shopping.

### Limitation

This program should be able and made a new curriculum school. This educational program needs to be intensified again to every school and general public. So, this smart consumer education program can effectively socialized.

### Evaluation

Ambassador the pro smartcone not yet maximal in sozialitation about smart consumer education to consumer general. The games pro smartcon have two version, hardcopy and software android. Respondent very happy in playing the games.

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# Effect of Transformational Leadership on Nurses' Organizational Citizenship Behavior Based on Work Value at Islamic Hospitals in Surakarta, Indonesia

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## Abstract

In a hospital, the nurses' role to materialize its excellence of service quality for the clients and their family is very important, and this can represent its service image. The choice of nurses' behavior affects the recovery process of a client. Therefore, the leadership style of a hospital shall be based on the nurses' ideal behavior quality materialization orientation, which is frequently termed as Organizational Citizenship Behavior (OCB), either the one oriented to individual (OCB-I) or the one oriented to organization (OCB-O). Transformational leadership style has a potential to materialize the expectation which is based on the work value adopted by the nurses.

The objective of this research is to examine and discuss the effect of transformational leadership style on the OCB based on the work value. The subjects of research consisted of 175 nurses in two Islamic hospitals, namely: PKU Muhammadiyah Islamic Hospital of Surakarta and Yarsis Islamic Hospital of Surakarta. The samples of research were taken by using the simple random sampling technique. The data of research were analyzed by using the moderation-based regression model of analysis. The validity test and the reliability test fulfilled the normative criteria ( $r$  product moment  $\geq 0.3$  and Cronbach  $\alpha \geq 0.6$ ).

The result of research shows that the transformational leadership style has a significantly positive effect both on the OCB-O and on the OCB-I. However, the work value in fact does not strengthen and/or weaken the effect of transformational leadership style on both the OCB-O and the OCB-I. The researchers and theorists need to study further the result of this research from the perspective which has an appropriate relevance.

**Keywords:** Transformational leadership, citizenship behavior, work value, Islamic hospital

## I. Introduction

In a hospital, the nurses' role to realize the service quality excellence for the patients as well as for their family is very important, and it will represent the hospital's service images or the hospital itself. Related to the efforts to improve the hospital quality service, the role of nurses becomes very strategic as an integral part in lowering the service cost and improving the hospital performance.

Managing the nurses community should be oriented toward improvement of the service performance well above the hospital's expectation, including in handling the possibility of stress and directing it into a force of



energy in order to improve the quality service. In a very competitive hospital working area, as mentioned by Broomberg and Mills (2004), the role of nurses become very vital as a determinant of success in providing more quality hospital services.

Nurses have very strategic role in assisting the doctors to accelerate the healing process through sincere utterances, attitudes, and notable behavior that will help the patients' healing efforts and/or their families. Nurses play roles for and stimulate patients so that they can and are willing to take care of their own health, both during the nursing care and in recuperation, and even for life. Nurses can be a magnet for patients and their families through their display of sincerity and ethical service behavior.

A nurse is one of the front liner staffs, who interacts more with patients and their families in the process of service delivery toward the creation and the improvement of patients satisfaction. On the whole, the patients' satisfaction is closely related to the nursing staffs' quality of compassion and service to the patients. According to John (1992), the patients experience in obtaining service significantly affects post-experience assessment, which will determine the decision in choosing hospital service in the future. It is the responsibility of the hospitals' supervisors and nursing managers to develop leadership style which can motivate and stimulate nursing staffs' inspiration to give the best service performance to the patients.

Ling, Chaiz, & Piew (2010) explains that the role of front-liner staffs who are directly involved in the service is positively related to the service quality to the customers. Compared to hospitals' other service staffs, a nurse who has higher frequency and intensity of contact with in-house patients will have immense opportunity in influencing the provision of quality service to the patients.

In carrying out their duty and role to give service, nurses must have a unique and interesting personal conduct. According to Ryan (2009), nurses' personal conduct influences patients' health. As a member of health caring team, a nurse should always coordinate cooperatively with other medical and non medical staffs to play the important role as the hospitals' spearhead and image representation.

Therefore, it needs awareness and evidence of behavior and performance which is well above the duty/professional normative calling, and it is not merely related to the consequence of financial compensation rewards. The behavior is known as OCB (Organizational Citizenship Behavior). In the concept of OCB there is a need to underline the requirement for ideal behavior for every organizational member, to place the orientation of organizational interest above personal and/or group interests.

The essence of OCB as stated by Organ (1988) is the spontaneous and voluntary individual behavior outside the context of job description and formal reward, which acts to improve the effectiveness and efficiency of various organizational functions. As stated by William and Anderson (1991), there is a behavior that is directed to an individual yet indirectly affects the organization positively, which is then called OCB-I, and there is a behavior that directly focuses on the organization and has an impact of improving the effectiveness of the functions of the organization, which is then called OCB-O.

A hospital staff including a nurse, who has high OCB, will display certain behavior, such as high altruism level. A hospital nurse with high altruism level will be very cooperative in giving his/her service interaction, which meets or even exceeds the expected standard, in order to realize the patients' satisfaction.

Podsakoff & MacKenzie (1994) find out that various OCB type behaviors are significantly related to the objective measures of organizational effectiveness, including sale performance index, quality and quantity of

production, and sale target percentage. The ideal behavior of nursing service performance personally is also affected by the work value, which becomes the underlying reason why somebody chooses to be a nurse.

The accuracy of a nurse's work value is an important determining factor in the behavior and performance to perform care and service. A leader has to be able to identify the work value factor and direct it to contributive work value for the realization of the ideal service performance. Ideally, the head of a hospital should orient more on the nurses work values which are the call of duties/performance instead of on those merely filling out spare time and earning extra income.

According to Enhart and Naumann (2004), the comprehension and application of OCB in hospital are very important. Meanwhile, Yoon and Suh (2003) state that there is still little empirical evidence on the positive effects of OCB on the quality of hospital services. It has to be studied since there is an optimism which guarantees the positive effect of OCB for the benefit of the successful development of the hospital organization. A leader needs to adjust his/her leadership style with the characteristics of his/her subordinates as well as to the external situation of the organization in order to gain his/her subordinates' trusts. A leader should show professional, competent, and dedicative behavior to influence his/her subordinates, and as such does not raise any skepticism and suspicion that the leader does adverse action for the subordinates as well as for the organization.

Of several relevant leadership styles that will be more popular at present and in the future is the transformational leadership. Lebrasseur, Whissell, & Ojha (2002) state that the leader's transformational leadership-nuanced approach to his/her subordinates will sharpen the strategy, structure, and culture for the processes of quality repair, including the quality of service continuously.

The core aspect of the cultural factor is the work value, whether it is instrumental (on the surface, narrow, and shallow ones), for instance, working as a nurse for something to do, to fill one's spare time, and to earn additional income. Also, if the work value is on developing one's career to achieve professional behavior, it is still considered as instrumental value. If the work value of a nurse is based on the call of duty/profession, it is already considered as terminal values, since it reaches the peak of the belief of the human existence. Based on this background, the theme of the research entitled "Effect of Transformational Leadership on Nurses' Organizational Citizenship Behavior Based on Work Value at Islamic Hospitals in Surakarta" was chosen.

The problem statement of the research is formulated as follows: Is there any effect of transformational leadership on nurses' organizational citizenship behavior based on the work values at Islamic Hospitals in Surakarta? Therefore the objective of the research is to examine and discuss the influence of transformational leadership on the nurses' organizational citizenship behavior based on the work values at Islamic hospitals in Surakarta.

## II. Literature Reviews

### Transformational Leadership

Yukl (2010) explains the essence of leadership as a process to influence others to understand and approve various interests that need to be carried out and how to perform them, and the facilities provision process through various individual and collective efforts to achieve the designated objectives. The application of appropriate leadership style allows the effectiveness of leadership and organizational performance. Ideally, a

leader has some different leadership styles and is able to apply it appropriately, which, according to Hughes, Ginnet, & Curphy (1999) is influenced by the characteristics of the leader and his/her subordinates, and by the situation.

Burns (1978), and later Bass (1985), introduce and develop transformational and transactional leaderships in political leadership. Transformational leadership is more dynamic and promises the embodiment of self-identification of the leader and the organization. Transformational leadership will optimize self-potency in improving the fulfillment to the higher level which will influence the increase of effectiveness and efficiency of the achievement of the organizational objectives.

In the beginning Burns (1978) only elucidates three transformational leadership dimensions; later with Bass (1985) he explains the fourth dimension. Those four transformational leadership dimensions are as follows: The first is idealized influence dimension, which emphasizes on the establishment of high standard of moral and ethic in job execution by establishing the leaders as an exemplary model figure who has esteemed charisma. Every subordinate is inspired to identify his/herself with the leader in accordance with the vision and mission which impart significant value for the future self-development. The second is inspirational motivation dimension, which emphasizes on the generating of subordinates' energy by the leader toward the actualization of vision and mission, along with optimistically high commitment to face a better future. The third is intellectual stimulation dimension, which emphasizes on the establishment of the condition and facility which challenge the subordinates to always think differently and to explore various new models and methods in managing the work problems creatively and innovatively to improve work efficiency and effectiveness. The fourth is individualized consideration dimension, which focuses on the learning to actualize the best opportunity in developing the potencies of subordinates, colleagues, and supervisors. The leader's behavior focuses on the provision of the individualized treatment for the subordinates that are strategically suitable with the correct requirements for the career development.

### **Organizational Citizenship Behavior**

Organ (1988) defines OCB as an individual behavior which is flexible, spontaneous, and voluntary, regardless of job description and the consequence of formal remuneration system, yet contributes to the functioning of the organization toward improved efficiency and effectiveness to achieve the organizational objectives. In this definition, OCB is seen in terms of awareness and calling to act concretely both individually by fellow personnel, supervisors, and customers, and organizationally, as long as it is related to the job importance and is constructive for the individual as well as the organization. Meanwhile, Pasmore & Fagen (1992) explain that the essence of OCB reflects individuals' active participation in transferring the systems in which a person works.

From several aforementioned meanings of OCB, the researchers conclude that OCB is the behavior to utilize organizational resources in intelligent, innovative, and creative way regardless of the role structure and the consequence of acquiring reward in order to improve effectiveness and efficiency of the behavior and performance of individual, groups, and organization. The operational definition of OCB in this research is oriented to the opinion of William & Anderson (1991), who divides OCB into OCB-I and OCB-O.

William and Anderson (1991) delineates OCB into two: The first is OCB whose behavior target aims at certain individuals who are concerned with the organization and is beneficial for the improvement of

effectiveness and efficiency of the organization; hereinafter referred to as Individual OCB (OCB-I). Furthermore, with reference to the opinion of Lepine, Eres, & Johnson (2002), OCB-I consists of the dimensions of altruism and courtesy. The second is OCB whose behavior target directly aims at organization and is beneficial for the improvement of effectiveness and efficiency of the organization; hereinafter referred to as Organizational OCB (OCB-O). Moreover, referring to the opinion of Lepine, Eres, dan Johnson (2002), OCB-O consists of three dimensions, namely: civic virtue, conscientiousness, and sportsmanship.

Therefore, there are five dimensions of ideal organizational citizenship behavior. The first is altruism, the behavior that show desire to help others. The second is courtesy, the behavior of someone who is on the alert to prevent others' problem even before it occurs. The third is civic virtue, the behavior of someone who actively participates or actively takes part for the benefit of the organization's interest. The fourth is conscientiousness, which is behavior of somebody who works sincerely above the minimum work demand. The last is sportsmanship, the behavior of someone who works sportingly.

### **Work Value**

Brightmen & Moran (1999) define work value as the creation and improvement of the internalization and actualization of comprehensive patriotism value and culture in regard to the organization, which can affect the subordinates' OCB performance. Also present is the concept of work value according to Wrzesniewski, McCauly, Rozin, & Schwartz (1997), which explains that all employees, both clerical and professional, perceive the job that they do based on three orientation values: The first is orientation to the income, which is mainly measured from the financial aspect, as the economic backbone as well as the life source. The second is orientation to the career, which is based on the improvement of achievement motivation and working professionalism through the process of competition and the improvement of prestige and satisfaction. The third is orientation to the calling of duty/profession which is enjoyed in such a way, as to unite with the service and devotion for the sake of one's and others' interest, disregarding the material and other worldly aspects. This last work orientation should be prioritized in a hospital to be developed by the organization leader, to be instilled into the nurses in performing his/her service.

Any profession or job in this world will always face various challenges, and nursing profession is not an exception. The challenges which are confronted by a worker or a professional will give him/her chances to be better. A worker or a professional should be able to find solution to overcome various hindrances that come his/her way every time, and he/she should consider them as motivation to urge him/her forward in his/her job.

Some researchers support the effect of transformational leadership on OCB. Givens, R. J. (2008) explains that transformational leadership will affect OCB-I, which in turn will also affect OCB-O. Choi (2006) studies athletic students and trainers. Piccolo and Colquit (2006); Podsakoff, MacKenzie, Moorman, & Fetter (1990) use the trust in leadership and work satisfaction variables as the mediating variable in the relationship between the transformational leadership and OCB. Podsakoff, MacKenzie, & Bommer (1996) explain that transformational leadership dimensionally influences OCB. Similar finding is also presented by Feres, Travaglione, & Cannel (2000); Muchiri (2002); Molero, Caudrado, Navas, & Morales (2007); Koh, Steers, & Terborg (1998); and Lepine et al., (2002).

The employees' work values will greatly influence the quality of behavior in realizing the performance, and this becomes part of the function and role of the leadership style of a leader in realizing the performance

effectiveness of his/her organization, including the embodiment of the ideal behavior (above the normative behavior). As proposed by Reave, L. (2005), among others, who emphasizes the optimality of spiritual value of the subordinates that he leads in developing excellent behavioral quality which is organization-oriented (OCB-O) and which is orientated to persons who are involved in the organization (OCB-I). Based on these stipulations, the following hypotheses are made:

A transformational styled leader should always design organizational tasks based on and orientated to the work value that is adopted by the staffs based on organizational culture, which, according to Xenikov & Sumosi (2006) will directly affect the organizational performance, which also influences OCB. It is because personnel feel that there is a matching value that unites everyone in the workplace. It can be expected that the personnel behave above the call of duty and has achievement that is above the specified standard. Conceptually the framework of the research can be observed in Figure 1.

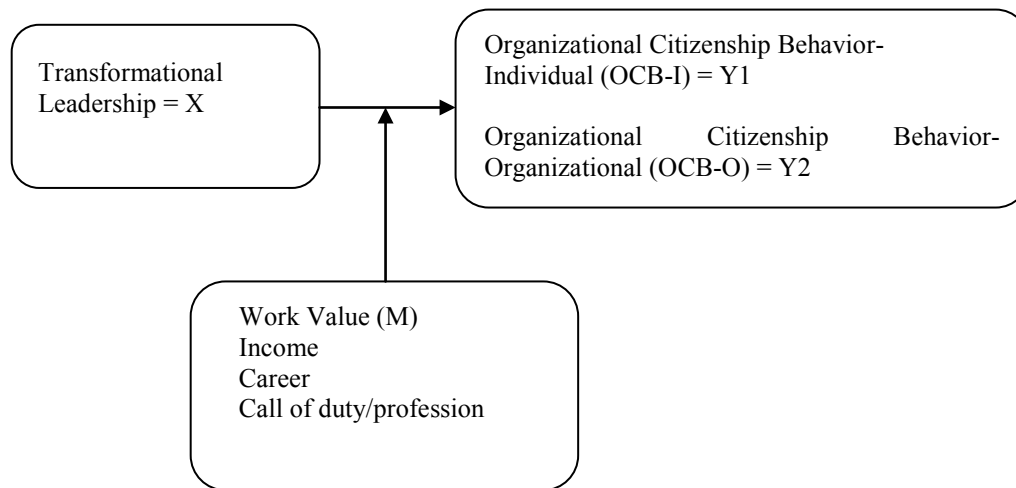


Figure 1: Research Framework

Based on theoretical study and research framework, the hypotheses of reseach are formulated as follows:

*Hypothesis 1: The supervisor's trasformational leadership positively affects organizational citizenship behavior-individual.*

*Hypothesis 2: The supervisor's trasformational leadership positively affects organizational citizenship behavior-organization.*

In relation to the work value described in the framework, (1) income, (2) career, and (3) dedication as stated by Wrzesniewski, McCauly, Rozin, & Schwartz (1997) reflect the transformational leadership that adopts and empowers the system value, including the nurses' work value system, which affects the outcome as moderating variable. Therefore, the other hypotheses are formulated as follows:

*Hypothesis 3: Work value moderates the influence of the transformational leadership toward organizational citizenship behavior - Individual.*

*Hypothesis 4: Work value moderates the influence of the transformational leadership toward organizational citizenship behavior - organization.*

### III. Research Method

#### Research Subject, Data Gathering, and Variable Measurement

The subjects of the research were 175 permanent in-house nurses who work in various wards in PKU Muhammadiyah Islamic Hospital of Surakarta and Yarsis Islamic Hospital of Surakarta, all of whom returned the questionnaires to be analyzed. The samples of the research were taken by using the simple random sampling technique. The data were collected by distributing 200 questionnaires based on structured questionnaire using the Likert scale I (SD = Strongly Disagree) up to 5 (SA = Strongly Agree). The transformational leadership variable was measured by using the opinion which was referred to by Podsakoff, MacKenzie, Moorman & Fetter (1990). OCB variables were taken based on the opinion of William and Anderson (1991) and Lepine, Eres, & Johnson (2002). Meanwhile, the work value variable was determined based on the opinion of Wrzesniewski, McCauly, Rozin, & Schwartz (1997).

#### Analysis

The first steps in this research were validity and reliability tests. Validity test was carried out to discover how accurately a measurement instrument measures what it purports to measure. The validity test in this research was executed on each item which compiles the research variables by using Pearson's Product-Moment Correlation technique with the aid of SPSS 15.00 for Windows Program. In the validity test, the questionnaire items were considered valid if the  $r$  correlation number was greater than 0.3. The reliability test was executed to assess how far the results of measurements are relatively constant if the measurements are administered twice or more. The reliability test in this research used the Cronbach's Alpha Technique with the aid of SPSS 15.00 for Windows program. An instrument was considered reliable if its Cronbach's Alpha coefficient was greater than 0.6. The reliability test was only administered to valid questionnaire items.

Then, hypothesis test were carried out using moderation-based regression model analysis. The steps were: Firstly, carrying out the regression analysis between transformational leadership and OCB-I and between transformational leadership and OCB-O. Secondly, carrying out the regression analysis between work value and OCB-I and work value and OCB-O. and Thirdly, carrying out regression analysis between the multiplying factors of transformational leadership and work value on OCB-I and OCB-O.

### IV. Conclusions

#### Results

The 175 respondents consisted of 72.6% female nurses and 21.4% male nurses, whose age ranged from 20 to 50 years old. They had the working period between one up to four years; the most is two-year working period, which encompassed 21.1% respondents. From the point of view of educational background, nurses human resources were dominated by 79.4% diploma graduate (D3), followed by High-school graduate (15.4%). Some of them held undergraduate degree/S1 (5.1%).

If the average score for each research variable were calculated, with the lowest score of 1 and the highest score of 5, the following results emerge: Transformational Leadership = 3.97; OCB-I = 3.85 and OCB-O = 3.95. It means that for all three variables, the scores are still able and should be undertaken to improve. The standard of the quality of transformational leadership style of the heads of the hospitals should be improved. The comprehension and implementation of OCB-I and OCB-O of the nurses, all participants, and other stakeholders should also be improved through the evidence of the improvement quality of the transformational leadership of all hospital leaders, both as an individual and as a team.

Validity test was carried out to discover how accurately a measurement instrument measures what it purports to measure. The validity test in this research was executed on each item which compiles the research variables by using Pearson's Product-Moment Correlation technique with the aid of SPSS 15.00 for Windows Program. In the validity test, the questionnaire items were considered valid if the r correlation number was greater than 0.3. Based on on Validity Test Result, all questionnaire items were considered valid, because all r correlation number is greater than 0.3, which meant that all item met the validity criteria.

The reliability test was executed to assess how far the results of measurements are relatively constant if the measurements were administered twice or more. The reliability test in this research used the Cronbach's Alpha Technique with the help of SPSS 15.00 for Windows program. An instrument is considered reliable if its Cronbach's Alpha coefficient is bigger than 0.6. The reliability test was only administered to valid questionnaire items. Since based on the result of the validity test all questionnaire items were considered valid, reliability test was administered to all questionnaire items. Based on the data in Table 3 on the result of reliability test, all instruments were deemed reliable, because the coefficients were all exceed 0.6.

The next step was the hypothesis test using the moderation-based regression model of analysis. The result of the moderation-based regression model of analysis on the OCB-I (OCB - Individual) and OCB-O (OCB - Organizational) was displayed on Table 1 below:

**Table 1: The Result of the Regression Analysis**

Free Variables	Bound Variable (OCB-I)			Bound Variable (OCB-O)		
	Coefficient	t statistic	P	Coefficient	t statistic	p
Transf. Lead.	0.536	8.250	<0.001	0.634	10.743	<0.001
Work Value	-0.118	-1.846	0.067	-0.108	-1.852	0.066
Transf. Lead. x Work Value	0.060	0.923	0.357	-0.007	-0.123	0.902
R square	0.306			0.428		
F statistic (probability)	25.178 (0.000)			42.659 (0.000)		

Source: Processed Primary Data

The transformational leadership on OCB-I has the coefficient of regression of 0.536 with the value of t statistic = 8.250 ( $p = 0.000$ ). The value of t table at  $df = 171$  with the value of  $\alpha = 5\%$  is 1.97. The value of t statistic is greater that of t table, and therefore,  $H_0$  which states that the transformational leadership does not affect OCB-I is rejected, and  $H_a$  which states that the transformational leadership affects OCB-I is verified. The transformational leadership affects OCB-I; the higher the transformational leadership, the higher OCB-I is. The transformational leadership on OCB-O has the coefficient of regression = 0.634, with the value of t statistic = 10.743 ( $p = 0.000$ ). The value of t table on  $df = 171$  with the value of  $\alpha = 5\%$  is 1.97. The value of t statistic is

greater than that of t table, and therefore,  $H_0$  which states that the transformational leadership does not affect OCB-O is rejected, and  $H_a$  which states that the transformational leadership affects OCB-O is verified. The transformational leadership affects OCB-O; the higher the transformational leadership, the higher OCB-O is. It can be concluded then, that the transformational leadership affects OCB-I and OCB-O; the higher the transformational leadership, the higher both OCB-I and OCB-O are.

The work value on OCB-I has coefficient of regression of -0.118 with the value of t statistic = 1.846 ( $p = 0.067$ ). The value of t table on  $df = 171$  with the value of  $\alpha = 5\%$  is 1.97. The value of t statistic is smaller than that of t table, therefore,  $H_0$  which states that the work value does not affects OCB-I is verified and  $H_a$  which states that the work value affects OCB-I is rejected. It means that work value does not influence OCB-I. Meanwhile, the work value on OCB-O has coefficient of regression of -0.108 with the value of t statistic = 1.852 ( $p = 0.066$ ). The value of t table on the  $df = 171$  with the value of  $\alpha = 5\%$  is 1.97. The value of t statistic is smaller than that of t table, and therefore,  $H_0$  which states that the work value does not affect OCB-O is verified, and  $H_a$  which states that the work value affects OCB-O is rejected. It means that work value affects OCB-O. Therefore, it is concluded that work value affects neither OCB-I nor OCB-O.

The moderating variable on OCB-I has coefficient of regression of 0.060 with the t statistic = 0.923 ( $p = 0.357$ ). The value of t table on  $df = 171$  with the value of  $\alpha = 5\%$  is 1.97. The value of t statistic is smaller than that of t table, and therefore,  $H_0$  which states that the moderating variable does not affect OCB-I is verified and  $H_a$  which states that the moderating variable influences OCB-I is rejected. On the other hand, the moderating variable on OCB-O has coefficient of regression of -0.007 with the t statistic = 0.123 ( $p = 0.902$ ). The value of t table on  $df = 171$  with the value of  $\alpha = 5\%$  is 1.97. The value of t statistic is smaller than that of t table, and therefore,  $H_0$  which states that the moderating variable does not affect OCB-O is verified, and  $H_a$  which states that the moderating variable affects OCB-O is rejected. It means that the moderating variable does not affect OCB-O.

## Discussion

Based on the analysis of moderation-based regression model, it is concluded that the nurses' different work value does not affect the nurses' OCB-I and OCB-I and that the levels of the nurses' OCB-I and OCB-O is a direct effect of the supervisor's transformational leadership. A leader should be able to affect his/her subordinates as well as other parties to comprehend and fulfill various interests that have to be performed and how to perform them, and the facilities provision process through various individual and collective efforts to achieve the determined objectives. A leader with transformational leadership style should always motivate, inspire, and stimulate, in a considerate way, to optimize subordinates' potency improvement toward the higher levels' need fulfillment, which will affect the improvement for efficiency and effectiveness in order to acquire the designated organizational objectives. The nurses' OCB-I and OCB-O to the patients in those Islamic hospitals are not affected by the nurses' work value differences. As a nurse working in Islamic hospital whose behavior accounts to OCB-I and OCB-O, the nurse should always defer to his/her leader. The nurses' OCB-I and OCB-O with the dimensions of altruism (helping others), courtesy (awareness/prevention), civic virtue (active role), conscientiousness (sincerity) and sportsmanship (fair conduct) is compliant with Islamic value. Those Islamic values supplant and even exceed all three work values which was only limited to the call of duty, career, or even merely to gain financial reward.



The implication of the finding of research encourages the management of the two hospitals to attempt to apply the transformational leadership style individually or collectively so as to materialize the OCB with the possibility of integrating the Islamic work value and the work value employed in this research in order to improve the excellence of the hospital service quality in the future.

A leader with transformational leadership style should always trigger and encourage his/her subordinates, to optimize the subordinates' potency improvement, to fulfill the needs for the higher level, which will affect the improvement of efficiency and effectiveness in order to reach the designated organizational purposes. Transformational leadership style has the following four dimensions: As has been elucidated previously, the research results show that the supervisor's transformational leadership directly affects the nurses' OCB-I and OCB-O. The nurses' work value differences affect neither the nurses' OCB-I nor the nurses' OCB-O. A nurse should always give the best service and care which among others will be reflected in the nurse's OCB-I and OCB-O toward the patients. A nurse needs to give the best service and care to the hospital patients, which is then reflected in the nurse's OCB-I and OCB-O toward the patients in that hospital. It is not influenced by the differences in the nurse's work value, whether the nurse provides the best service and care due to the factors of income, career, or call of duty/profession. In Islamic work value, in the nurses' OCB-I and OCB-O, the nurses should always be obedient to the supervisor and should trust the supervisor fully as their leader. They should also be held accountable for their work. On the other hand, a Moslem supervisor should always perform his/her responsibilities, which should be properly accounted for. This Islamic work value may become the main basis for the nurses, which can compensate the work value which is oriented to income, career, and/or call of duty/profession.

### **Limitation**

Transformational leadership and OCB, either OCB - I , or OCB - O in this study is based only on the perception of nurses that is based on momentary assessment, rather than on the results of the assessment are based on a series of time so that the application can be described tendency transformasionalitas relatively describe leadership in reality actually . In addition, the conceptualization and operationalization of the value of working as a moderator variable used is not always equal to the value of the underlying Islamic work attitude, behavior and performance of the nurses at the hospital which is based on Islamic work ethic

Based on the aforementioned conclusion and research limitation it is recommended that: Firstly, The perception of research subject toward transformational leadership and OCB will be better to determine a time range for the research based on certain periods that can be used to evaluate the trend of evaluation, for example during the last years. If the research is conducted in the beginning of 2015, the data covers the previous 4 years ( 2011; 2012;2013; and 2014). Scondly, The value of work is considered weaken or strengthen the effect of transformational leadership is replaced with Islamic work ethics. The scores of OCB-I and OCB-O should also be improved, through training programs and empowerment of the nursing services, with the intention to ever increasing the nurses' standard of the OCB-I and OCB-O.

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## **Internationalization Process Behavior of Thai SMEs: A Cultural Exploration into Risk Perception**

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### **Abstract**

This research examines the cross-cultural applicability of internationalization process theory, particularly as concerns culturally-driven risk perception through an exploration into the internationalization behavior of SMEs in Thailand. Research to date which examines the internationalization process of the firm has been focused almost exclusively within the Anglo-European context. Due to contextual differences these theories may not apply to the same extent and in the same way in the East Asian cultural environment where a primary influence – risk perception – is held to differ. In this study we explore this issue using a multi-case, interpretive approach focusing on the attitudes and behaviors of senior managers/owners within eight Thai SMEs. Findings suggest that risk perception affects internationalization behavior as a moderating influence to stem from a mix of individual personality and wider societal-level norms and assumptions. Moreover, risk-related behaviors affect internationalization behavior in different ways, including the propensity toward either proactive versus reactive internationalization modes and the extent to which the SME progresses beyond exporting. Implications for theory and practice are then discussed.

**Keyword:** internationalization, SMEs, risk perception, exporting, Thai indigenous culture

### **I. Introduction**

This research explores whether, to what extent, and how national culture influences the internationalization process behavior of Thai SMEs, specifically in its diverging from contemporary internationalization process theory assumptions and predictions. We focus on the impact of culturally-derived risk perception on the way in which these firms selected their markets, entry modes, pace of initial internationalization, and subsequent international expansion and development. The overarching aim of this study is to explore the applicability of internationalization process theory (developed primarily in the Anglo-European context) in the Thai societal/business context, and in to examine in particular how far any differences observed in the internationalization process behavior of Thai SMES are due to risk-related perceptual variations.

### **Motivation and Research gap**

The increasing globalization of the business world has made the subject of internationalization of the firm highly topical. However, research on internationalization of the firm has traditionally focused on large multinational enterprises as the unit of analysis. This is in spite of the fact that the small and medium-sized enterprises (SMEs) are also hugely active in international markets. The emergence of SMEs internationalization is regarded as a key contributor to national economic growth, particularly in developing countries. Due to the changing world economic situation, greater international competition and saturation in domestic markets are prompting increasing numbers of SMEs to become involved in international activities (OECD 2000).

To date, SME internationalization research, as with the vast majority of internationalization research, is centered within the empirical context from which the initial theory was originally constructed. This comprises what can be loosely described as the ‘Western’ or Anglo-European-based context, particularly USA, Sweden, Denmark, and Australia. Given that such studies have been developed and tested in these contexts almost exclusively, there remains a question mark over how far these findings are applicable to contexts that do not share their cognitive and behavioral norms and values, despite the small body of work conducted to date (e.g. Andersson *et al.* 2006; Thai and Chong 2008).

It is therefore both timely and important to consider the process of SME internationalization in contexts that differ markedly from those traditionally used in the internationalization literature. From the available literature it appears that very few studies have focused on the internationalization of SMEs in developing Asian economies. Therefore, this present study has particular interest in developing Asian economies, specifically Thailand.

The SME sector is acknowledged as a specific economic category contributing significantly to Thailand’s economic development. It plays a significant role in employment, income generation, and increasing economic value added. Indeed, SMEs play a crucial entrepreneurial role in Thailand. In 2012, 98.5% of the total enterprises in Thailand were SMEs. They accounted for 80.4% of total enterprises employment and contributed 37% of total GDP ([www.sme.go.th](http://www.sme.go.th)). Thailand’s economy mainly relied on export activities as 62.34% of total GDP was from the export value. Export activity is also very important for SMEs as 48.53% of SMEs GDP came from export ([www.sme.go.th](http://www.sme.go.th)). Consequently, the development of SMEs towards operational internationalization is one of the main national strategies according to the National Economic and Social Development Plan ([www.sme.go.th](http://www.sme.go.th)).

Importantly, Thailand embodies a specific cultural context which, intuitively, may cause the behavior of indigenous SMEs – through their managers/owners – to behave differently from those operating in the USA, Scandinavia, Australia and other Western-based cultures. Thai national culture is cohesive and strong and has endured for over a thousand years without Western colonization (Andrews and Chompusri 2001). According to prominent management culture theorists like Geert Hofstede (2001) cultural differences can be identified, categorized into dimensions and then gauged/compared. Thai culture differs significantly from Anglo-US and European cultures (e.g. USA, Australia, Sweden, Denmark) in every dimension of cultural dissimilarity to emerge from relevant international management theory (Nimmanandh and Andrews 2009).

A major cultural difference distinguishing Thailand from cultures such as those mentioned above is one of ‘uncertainty avoidance’ (Hofstede, 2001). This dimension holds important implications for the perception of risk among societal inhabitants. More precisely, according to theorists, Thai culture exhibits significantly higher uncertainty avoidance and is also likely to hold less tolerance for ambiguity compared to the Western-based

cultures where the extant internationalization process theories are developed and executed. This implies that Thai cultural inhabitants maybe less willing to take risk than their counterparts in these countries, and that they are more risk averse in their business dealings.

Managerial perception of risk is considered as one of important factors influence the internationalization of firm (e.g. (Johanson and Vahlne 1990; Ahmed *et al.* 2002; Acedo and Jones 2007). It affects firm's international decisions, pace of internationalization, choice of entry modes as well as international development. However, as Johanson and Vahlne (2009, p.1432) argue that "*it would appear that neither we nor other researchers really know much about the propensity for taking risks either in the past or now*". Adding to this knowledge deficiency is the fact that risk perception has been considered to vary across cultural boundaries (Bontempo *et al.* 1997).

Culturally-derived differences in risk perception may thus lie at the source of variations in the way SMEs in different cultures behave regarding their internationalization process behavior. To date, however, even in the small number of studies which examine the internationalization process behavior in emerging Asian environments, the importance of this variable has not, explicitly, been considered in any depth (see e.g. Andersson *et al.* 2006; Thai and Chong 2008).

## **Method**

In pursuit of our research objectives we employed an exploratory, interpretive approach using predominantly qualitative techniques for data collection and analysis sourced from eight SMEs. In-depth semi-structured interviews are adopted as the major means of data collection complement with observation, diary notes, and documentation from various secondary sources.

The SMEs selected are from the handicraft manufacturing industry, specifically those that already serve international markets. Repeat, semi-structured interviews (as well as analysis of company information and notes made from direct observation) were held with those owners/managers with overall responsibility for the internationalization of their respective organizations. This meant the owner/founder, along with the senior manager in charge of international operations. These interviews – and the discussions, attitudes, opinions and feelings these uncovered - formed the major components of our data. Interviews were substantially corroborated throughout the process by both direct observation of respondents, their non-verbal communication and behavior, and also through non obtrusive documentation. In this way we were able to triangulate our findings and, again, be more confident in the validity of our data interpretation

Using template analysis as analytical strategy, we categorized and unitized data through a stage process throughout the course of collection and analysis. Data was coded using both open and then axial coding to explore relationships, comparisons, patterns and contrasts among respondents' statements and opinions. This analytical strategy combines a deductive and an inductive approach to qualitative analysis in the sense that codes were predetermined and derived deductively by considering existing literature and theory before we collected and analyzed our data. We then amended or added to them as the process continued.

We conducted within- and cross-case analyses of our SMEs. For each company analysis began with a detailed write-up with the objective of becoming familiar with each company as a stand-alone entity, and to let the unique patterns of each company's internationalization development emerge through the rich description.

The theoretical framework of the study was referred to broadly in order to derive the themes and constructs from each of the companies, and for organizing and contrasting the evidence to emerge. This allowed themes and constructs of each case to converge at a broad level with reference to the theoretical framework, and at the same time to diverge at each individual company. We then compared our case companies based on the themes and constructs identified in the first round of interviews with follow-up discussions. Respondent interpretations and evidence were compared and contrasted in order to search for patterns in contrast and comparison.

## Findings and Discussion

There are a number of key findings to report from this research. Overall, the examined Thai SMEs exhibit demonstrably *differing* patterns of Internationalization process behavior from existing internationalization process theories focused in open, global, primarily the Western or Anglo-European-based context, particularly USA, Sweden, Denmark, and Australia (e.g. Johanson and Vahlne 1990; Oviatt and McDougall 1995; Knight and Cavusgil 1996).

More significantly, the Thai SMEs in this study do not internationalize in the incremental gradual manner through the progressive stages suggested by the stage theories (e.g. Johanson and Vahlne 1990). Although the majority of the examined SMEs expressed rapid initial internationalization behavior and can be classified as ‘born global’ firms (e.g. Andersson and Wictor 2003; Andersson *et al.* 2006; Knight and Cavusgil 1996), they do not in any case progress their internationalization process further than exporting. All of the SMEs in this present research effectively ceased their internationalization activities at the stage/mode of exporting – with no future plans to develop their internationalization operations any further.

Our findings suggest that three major variables for this: *varying levels of risk perception, lack of resources* and *lack of knowledge/understanding*. Concerning the latter factors (i.e. lack of resources of the firm and/or owner/manager’s lack of knowledge/understanding of international markets), these together helped determine the firm’s decision to use exporting as the initial form of entry mode, their decision not to self-manage the export process from the inception of their international market involvement, and their decision not to progress beyond exporting.

Regarding risk perception specifically, our findings reveal this affected the internationalization process behavior of the examined SMEs in two ways i) *directly* – in the course of decision to internationalize, self-manage of exports, and decision not to progress beyond exporting and ii) *indirectly* through exacerbating the conditions of lack of knowledge/understanding and/or lack of resources when deciding on the choice of entry mode, whether or not to self-manage the export process from inception of firm’s international market involvement, and whether to progress beyond exporting.

Findings also strongly suggest that the effect of risk perception outlined above occurred at two broadly-defined levels, specifically at the individual level (where the influence is indirect) and at the societal-culture level (where the influence is more direct) in the course of decision to internationalize, self-manage of exports, and decision not to progress beyond exporting.

At the individual level, there are differences in risk perception found among our owners/managers – based on personality, experiential and cognitive differences – that influences their internationalization process behavior. They concern specifically the decision to serve international customers, the pace of

internationalization, and the choice/progression of indirect to direct modes of exporting. However, there were also more broadly-derived perception differences that exist at the societal-culture level and that affected all our respondents emphatically in the same way. This concerns their overall internationalization development behavior, in that they all show reactive internationalization process behavior and all perceive anything beyond exporting to comprise a far greater risk and have never – and would never – contemplate such a progression.

In serving to identify and explicate these important factors this study contributes to the sparse but growing body of work which questions the cross-cultural applicability of existing internationalization process models (e.g. Johanson and Vahlne 1990; Oviatt and McDougall 1995; Knight and Cavusgil 1996), particularly for the burgeoning cohort of SMEs not only in Thailand but right across the emerging Asian continent. In practical terms this may be of interest for Thai SMEs that are either in the beginning of interest or starting in the internationalization and even Thai SMEs which currently involve in the internationalization process. Additionally, this should not only benefit local SMEs but also could be applied, possibly, to SMEs in Southeast Asia (such as Malaysia, Indonesia, Vietnam, Laos, Myanmar, and Cambodia) or, more widely, to other cultural contexts expressing similar perception of risk.

This research should also be significant within the academic community as to determine whether the framework developed will be useful if applied to other circumstances and can be used as a pre-study for other research. Finally, this research may be of interest to public authorities involved with SMEs growth and development, who are willing to offer opportunities to internationalize. An encouraging fact and future outcomes are likely to create confidence among participants.

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# **Ipteks Effect for Export Products, Government Policy, Environmental of Religious Culture Social, Cost Efficiency of Export Performance Craft Wood Furniture in Klaten Central Java - Indonesia**

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## **Abstract**

Opportunity increase wood furniture handicraft industry to face the challenges of the ASEAN Economic Community, Efforts were made, strategic trade with free trade between ASEAN or ASEAN- China Free Trade Area (ACFTA). The problem of this study factors that affect export performance in the export? How the influence of internal and external factors on the performance of exports. The purpose of this study to determine the factors that affect the performance of export companies, how much influence each of the internal and external factors on the export performance? The results showed that the External Factors government policies, social cultural and religious have a negative relationship to the performance of export companies. Internal factors, firm size, export experience, motives proactive, reactive motives and cost efficiency strategies; proactive and reactive motif motifs have a negative relationship or do not affect export performance. While the size of the company, export experience and cost efficiency strategies have a positive relationship. Products for export science and technology program in Year 2 (2015) increases, providing infrastructure support, training in appropriate technology in improving the quality and production capacity as well as the export of accounting information systems. This type of research is the study and development of export products in the CV. Cakra Antik Furniture and Fauzi Jati Furniture can improve competitiveness, quality/quality also has a competitive price in the international market.

**Keywords:** Science Technology, Government Policy, Environmental, Cost Efficiency and Export Performance.

## **I. Introduction**

### **Background**

Opportunities to improve the furniture industry to face the challenges of the ASEAN Economic Community in 2015, efforts were made, the creative industry in Klaten regency furniture can obtain strategic trading opportunities

with the free trade between ASEAN or ASEAN China FreeTrade Area (ACFTA). This industry can gain a strategic trading opportunities with the free trade between ASEAN or ASEAN China FreeTrade Area (ACFTA). Currently origin Indonesian furniture products have been exported to several countries region of Europe, America, Africa, the Middle East, and Asia. Some countries are relatively new market for Indonesian furniture exports, including Russia, India, and throughout Latin America, except for Argentina, which is still a very small portion. On the other hand, foreign investment in the sector of furniture or furniture into Indonesia so far are from Germany, Japan, Finland, Taiwan, and most recently the Philippines. Indonesian furniture exports during the first four months of 2014 has reached USD637 million, decreased by approximately 1.2% compared to the same period in 2013. However, he agrees peningkatan20% target of furniture exports this year. In 2015 this target realization could reach \$ 2 billion. Various promotions and exhibitions abroad are aggressively we did in the last two years is expected to encourage acceptance of the export, adding, competitiveness of Indonesian furniture lies in the source of natural raw materials are abundant and sustainable, diversity of design styles are distinctively local, and supported resource abundant human. As a global shift in people's lifestyles are likely to choose environmentally friendly products, this momentum is a great opportunity for Indonesia Thirty Largest Export Destination For Products Of Industry as in Table 1.

There are some major problems and issues that make this industry has not run optimally, including; quality products: the global market demand for higher quality products and attractive design, the emergence of new competitors: emerging competitors in both local and global markets (China, Vietnam, Philippines, etc.), human resources, improving the quality of skilled human resources is still lacking , availability of raw materials: the degree of dependence of raw materials from outside the region is quite high, so that under certain conditions the production process is interrupted and the control of raw material prices is weak so as to reduce the competitiveness of products, and the absence of clear rules of the market price. capital: limited access to capital from banks. marketing: marketing access either through the exhibition of products and through online media is still lacking. Small artisans never allocates promotion to expand its business, so that what is needed is government assistance for free promotion for them. Science and technology program For Export Products (IbPE) Solutions Offered By outline the problems faced by SMEs include issues of organizational management and human resources, production issues, financial issues and marketing issues. To encourage SMEs can enter the export market opportunities and then IbPE program (Science and Technology for Product Export) in the first year (2014) to strengthen SMEs in the field of management and organization, as well as improving the quality of the product. IbPE Program (Science and Technology for Product Export) in the second year (2015) aims to nourish the SME finance are in year 3 (three) SMEs to increase exports. Troubleshooting methods offered is to organize IbPE Program (Science and Technology for Product Export) business training for SMEs have problems in aspects related business and then followed by the provision of mentoring activities for SMEs.

### **Formulation Of The Problem**

Problem formulation in this research are: 1) What factors can affect the internal eksternal and export performance in Klaten, Central Java province of Indonesia to export? 2) What is the impact of each such factor on

the export performance of existing companies in Klaten, Central Java province of Indonesia? 3) How to Influence science and technology For Export Products, Government Policy, Social and Cultural Environment Religion Against Cost Efficiency Wood Furniture Handicrafts Export Performance in Klaten, Central Java Indonesia?

### **Research Purposes**

The purpose of this study is as follows: 1) What factors can affect the performance of export companies in Klaten, Central Java province of Indonesia. 2) Knowing how much influence each of these factors on the performance of export companies in Klaten, Central Java province of Indonesia. 3) The influence of science and technology Knowing Products For Export, Government Policy, Social and Cultural Environment Religion Against Cost Efficiency Export Performance Craft Wood Furniture in Klaten, Central Java Indonesia.

## **II. Theoretical Review**

Venkatraman and Ramanujam (1986) showed that the company's performance is a multidimensional construct. In this case, the performance of the company consists of financial performance, business performance, and organizational performance. Financial performance central area of organizational effectiveness. The performance measures considered very important, but not enough to define the overall effectiveness. Accounting-based standards such as receipts on assets (return on assets), acceptance of sale (return on sales), and return on equity measure of financial success.

These indicators describe the current profitability. Business performance measures related to the market as the market share of the market, growth, diversification, and product development. There are two dimensions to this performance, the indicators related to the existing business growth and indicators relating to the company's position in the future (new product development and diversification). Organizational effectiveness measure is closely related to stakeholders. The size is customer satisfaction, quality and social responsibility.

There are two dimensions, namely indicators relating to the quality (product quality, employee satisfaction), and indicators related to social responsibility culture and religion (environment and community). Operations Quality Shipping Time Production Cost Vision Product Satisfaction activity Size Size Flexibility Objectivity Production Department and Unit Operations Business Unit Strategy Pyramid size obtained from the translation of the company's objectives and vision of the main functions of the business units, which are financial (financial) and markets (market).

Financial performance and market success should be supported for the company's ability to satisfy its customers (customer satisfaction), the flexibility of the product (flexibility), and the ability to produce effective and efficient (productivity). Last level needs to be done by each department and work stations is how to keep the products are of good quality (quality), the speed of the production process and product delivery (delivery), shorter process time (process time), and the cost of the cheap (cost). The fourth perspective is believed to be able to support the company's ability to satisfy the consumer, have a flexible product, and kemampau production and productive employees.

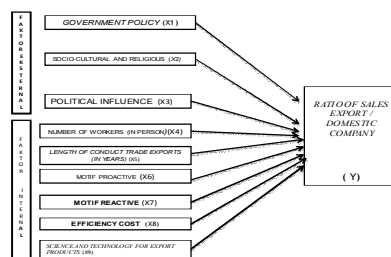
According to the Theory of Comparative Advantage Miles (Boediono, 1994) assumes that a country will

specialize in the export of certain goods if the country has a comparative advantage (comparative advantage), the largest, and will specialize in the import of goods if the country has a comparative disadvantage (comparative disadvantage). This theory basically states that the value of an item is determined by the amount of labor that has gone into producing the goods. More and more are devoted to producing an item, the more expensive the item (Nopirin, 1991).

Kotabe and Cankota (Ross and Michael, 1999) states that in order to improve the experience of exporters, their skill level is insufficient, hence the need to consider more clearly specialized skills that require a survey for exporters. Expertise is more important is logistics and general management expertise and financial marketing. This enables a company that has made exports in the long term can continue to survive in the export market.

Creative Industries Export Value Export Value (Department of Commerce, 2009) is meant gross value added share in overseas market or value of sales of products and services of the creative industries in the international market. The greater the value of exports of creative industries showed increasingly competitive position of national creative industries in the international market. The total value of exports generated by the business field 14 NEC (Value Exports of creative industries). Besides the size of the company, export performance is also determined by the company's experience in export activities, where the more experienced a company in export activities, the performance is also higher. According to research Munizu (2010) that the internal factors which comprises aspects of human resources, financial aspects, technical aspects of production / operations, and marketing aspects of the market and has a significant and positive effect on the performance of micro and small enterprises. Then External factors comprising aspects of government policy, socio-cultural aspects of religion and economics, and related aspects of the role of institutions have a significant and positive effect on the performance of micro and small enterprises.

### Frame Research



### Hypothesis:

- H1 = Government policies affect the performance of exports
- H2 = Socio-cultural and socio-cultural and religious faith on the export performance
- H3 = Political influence on export performance
- H4 = Total employment effect on export performance
- H5 = Length of Conduct Export Trade influence on export performance
- H6 = Motif Proactive effect on export performance

H7 = Motif Reactive effect on export performance

H8 = Efficiency Cost effect on export performance

H9 = Science and technology for export products affect the export performance

### Research Methods

Measurement of variables. This study uses its own charging measurement method using a few questions directly to the respondents to question motives dummy. Sedangkan scale proactive, reactive motives and strategies using a Likert scale. Where respondents were asked to give rank each question asked from strongly disagree (1) to very Agree (5). Population and Sample. The population in this study is a company that has been doing the export trade to international markets in Klaten, Central Java province of Indonesia, where they amount to as much as 2 SMEs are CV. Cakra Antique Furniture and CV. Fauzi Jati Furniture Because the population to be studied is relatively limited, the researchers took the entire population to be studied as an object of research. Method Of Collecting Data. In this study used primary and secondary data. Primary data is used to assist the research process through media interviews with corporate leaders who influence the decision-making process of the company. Questionnaires companies broadly divided into 4 sections. Part 1 includes the identity of the company. Part 2 covers the identity of respondents. While section 3 includes questions about Ekaternal factor, which consisted of Government Policy, Culture and Religion, and Politics. Section 4 is a question of the Internal Factors yang meliputi: Company Size, Experience Export, proactive Motif, Motif Reactive and Cost Efficiency Strategy. For secondary data obtained export trading company in Klaten, Central Java Province.

Establishment of Model

Based on the above hypothesis testing, using a multiple regression model as follows:

$$Y = a + b1X1 + b2 X2 + b3X3 + b4X4 + b5 X5 + b 6 X6 + b7X7 + b8 X8 + b9X9$$

where Is:

*Y = Ratio of Sales Export / Domestic Company (in tons)*

*X1 = Government Policy.*

*X2 = Culture and Religion.*

*X3 = Politics*

*X4 = number of workers (in person)*

*X5 = Length of Conduct Trade Exports (in years)*

*X6 = Motif Proactive.*

*X7 = Motif Reactive*

*X8 = Efficiency Cost*

*X9 = Science and technology for export products (IbPE)*

### Results Analysis

#### Characteristics Company

The results showed the company was established more than 20 years. This shows that the company has a long standing samples. When viewed from the export experience, most companies have experienced in working in the export market. The company has exported over 10 years. Total workforce of the company has a workforce of less than 40 people, It can be concluded that the SME export company CV. Chakras Antique Furniture and Fauzi Jati Furniture in Klaten still considered relatively small. It is not unreasonable to see export product itself is a product of wooden furniture. While that of the use of technology by the company is still in traditional and undeveloped, with the implementation of science and technology program For the first year of Export Products 2014 and two in 2015 to

obtain the appropriate technology in the form of machine oven, electric saws, compressors machinery and equipment that supports the administration of computers and systems accounting information firms have modern technology.

### **Analysis of Factors Affecting the Company's Export Performance**

Testing with multiple regression is intended to describe the export performance of the external factors and internal factors affecting the company in the export. The test is performed using the t test and F test that will reveal a picture of regression results either partially or simultaneously to export performance. So that the influence of the model obtained each external and internal variables that affect export performance in CV. Chakras Antique Furniture and CV. Fauzi Jati Furniture. Table 2 Output Target Program Science and Technology For Export Products (IbPE) 2015.

#### **T test (Test Partial)**

From the results of regression testing results obtained coefficient of determination ( $R^2$ ) of 0,561. Bila seen none of the correlation results are variable t hitung. Hal above results indicate that the regression model testing is only done once repetition saja. Ini indicates that the regression model has met requirement that none of the independent variables were excluded from the model. Next is to look at the value of t to t tabel. Adapun criteria stated is when  $H_0$  is accepted if  $t < t$  tabel. Sebaliknya  $H_0$  will be rejected if  $t > t$  table. In this analysis, the value of t table ( $\alpha / 2, n-2$ ) (0.025, 25) is 2.060. When viewed from the t table and by comparing with the whole t of each independent variable, is smaller than the value of the variable t table except politics (X3) that is equal to  $2.671 > 2.060$ . It shows that only the political variables that affect the export performance of the existing equation regression models. While the other variables do not affect. Overall results can be seen in the table below.

From the results of regression testing results obtained coefficient of determination ( $R^2$ ) of 0,561. Bila seen none of the correlation results that are above outcome variable t. Regression Model Testing For residual assumptions are met, then the regression model testing feasible. Simultaneous testing regression model test results simultaneously with the hypothesis:  $H_0 : \beta_1 = \beta_2 = \dots = \beta_p = 0$

#### **T test (Test Partial)**

Individual testing Due to simultaneous test, it is known that the regression coefficient ( $\beta$ ) is meaningful, then the next will be investigated, where a significant regression coefficient on the model and which are not the test statistic t and  $\alpha = 5\%$  through

#### **Hypothesis:**

$$H_0 : \beta_i = 0$$

$$H_1 : \beta_i \neq 0$$

Not all significant regression coefficients in the model. In addition, it was found the close relationship between the predictor variables (indicated by VIF above 5). There is only one variable that has a significant regression coefficient, ie X9 (science and technology For eexport Products). Nevertheless, should not immediately eliminate the variables that seem meaningless from this regression model. Therefore, try to enter one by one variable and the observed variables which are likely to affect the response. Thus, a new regression model is obtained and testing of residuals assumptions as follows. Table 4 Analysis of Variance.

Shows that the regression model testing is only done once repetition . Indicates that the regression model has been qualified where none of the independent variables were excluded from model. Stated is when  $H_0$  accepted if  $t < t_{table}$ .  $H_0$  will be rejected if  $t > t_{table}$ . In this analysis, the value of  $t_{table}$  ( $\alpha / 2, n-2$ ) (0.025, 25) is 2.060. When viewed from the  $t_{table}$  and by comparing with the whole  $t$  of each independent variable, is smaller than the value of the variable  $t_{table}$  except politics (X3) that is equal to  $2.671 > 2.060$ . It shows that only the political variables that affect the export performance of the existing equation regression models. While the other variables do not affect. Overall results can be seen in the table below. From the results above show that the hypothesis is partially independent variable only one variable influencing that political variables (X3). While some variables such as firm size (X4), export experience (X5), and cost efficiency strategy (X8), science and technology for export products (X9) has a positive value but the  $t$  value obtained is smaller than  $t_{table}$ . For government policy variables (X1), socio-cultural and religious (X2), proactive motif (X6), Reactive motif (X7) had negative results. So all four of these variables does not affect export performance.

#### **Union F (Simultaneous Test)**

Further testing may be done simultaneously or F test to determine whether all of the independent variables have the same effect on the dependent variable (Algifari, 2000). Ie by comparing the critical value of F ( $F_{table}$ ) with F count contained in the Analysis of Variance table of the results of the calculation. The criteria used were the  $H_0$  accepted if  $F_{arithmic} < F_{table}$  and if  $F_{count} > F_{table}$  this means that  $H_0$  is rejected. While in this analysis of the calculated F is equal to 2,873 while the value of  $F_{table}$  is 2.51 to 0.05  $\alpha$  with degrees of freedom equal to (8,18) then the analysis turns on the calculated F value is greater than the  $F_{table}$ . This proves that all independent variables together greatly affect the dependent variable. To better know how big the entire independent variables can explain the dependent variables seen by the coefficient of determination ( $R^2$ ). From these results it can be said that all the independent variables can explain the dependent variable which amounted to 56.1% and the remaining 43.9% is explained by other variables outside the model. For more details can be explained influence of each independent variable on the dependent variable can be explained as follows. From the research that has been done, it can be drawn a conclusion as follows: From the results of regression testing results obtained coefficient of determination ( $R^2$ ) of 0,561. seen none of the correlation results that are above outcome variable  $t$ .

Regression Model Testing For residual assumptions are met, then the regression model testing feasible. Simultaneous testing regression model test results simultaneously with the hypothesis:

$$H_0 : \beta_1 = \beta_2 = \dots = \beta_p = 0$$

*H<sub>1</sub>: At least 1  $\beta$  are not equal to zero. And statistical F test with  $\alpha = 5\%$  are:*

He third model is obtained with  $R^2$  of: 50.4% and amounted to 48.3%  $R^2$  and has met the residual assumptions. Indeed, the value of  $R^2$  and  $R^2$  in this model is smaller than before, but the regression coefficients obtained more meaningful and do not appear to be any multicolinieritas on the predictor variables. Here is a simultaneous and individual testing for model. Individual testing Due to simultaneous test, it is known that the regression coefficient ( $\beta$ ) is meaningful, then the next will be investigated, where a significant regression coefficient on the model and which are not the test statistic  $t$  and  $\alpha = 5\%$  through



Hypothesis:  $H_0 : \beta_i = 0$

$H_1 : \beta_i \neq 0$

External Factors which consists of government policy and culture Social and Religious have a negative relationship to the performance of export companies. This case shows that the wisdom that has been done by the government to inhibit the increase in the company's overall export performance. To socio-cultural, socio-cultural differences, religion and culture of each country does not affect the performance of the company in exporting. As for the political variables have an influence in increasing the export performance of the company. This proves the political stability in the country has affected the export performance in Klaten, Central Java province of Indonesia. As for the internal factors which consists of company size, export experience, Motif Proactive, Reactive Motifs and cost efficiency strategy turns Motif Motif Proactive and Reactive have a negative relationship or do not affect export performance. As for the size of the Company, export experience and cost efficiency strategies have a positive relationship. Of the three internal variables of this company should deserve attention in future efforts to improve export performance. This is because the internal potential possessed by the company today is a resource for the development and improvement of the performance of export companies in Craft wooden furniture in Klaten, Central Java province of Indonesia in entering international trade ahead.

### III. Conclusions

#### Results

External Factors which consists of government policy and culture Social and Religious have a negative relationship to the performance of export companies. This case shows that the wisdom that has been done by the government to inhibit the increase in the company's overall export performance. To socio-cultural, socio-cultural differences, religion and culture of each country does not affect the performance of the company in exporting. As for the political variables have an influence in increasing the export performance of the company. This proves the political stability in the country has affected the export performance in Klaten, Central Java province of Indonesia. As for the internal factors which consists of company size, export experience, Motif Proactive, Reactive Motifs and cost efficiency strategy turns Motif Motif Proactive and Reactive have a negative relationship or do not affect export performance. As for the size of the Company, export experience and cost efficiency strategies have a positive relationship. Of the three internal variables of this company should deserve attention in future efforts to improve export performance. This is because the internal potential possessed by the company today is a resource for the development and improvement of the performance of export companies in Craft wooden furniture in Klaten, Central Java province of Indonesia in entering international trade ahead.

#### Discussion

From the results of the above regression Processing using t test (partial test) showed that factors significantly influence is Politics. Overall from External and Internal Factors factors above found that a stable political factors can improve the performance of export companies. Thus this is the only factor affecting the performance of export companies in Craft wooden furniture in Klaten, Central Java province of Indonesia. When

viewed from the F test (simultaneous test) turns the entire existing factors both external and internal influences the performance of the company in export Craft wooden furniture in Klaten, Central Java province of Indonesia. The results prove that the equation of the regression model in this study with previous studies have in common the overall affect export performance of the company. Although this study proves that the more powerful external factors influencing export performance in contrast to previous studies resulted in the internal factors that affect the performance of exports, but in general there is an export company in Craft wooden furniture in Klaten already included in the advanced phase, where the company has exported regularly to gradually exist in expanding its export markets in the International market.

### **Limitation**

Productive Resources Access to productive resources is assets should be owned businesses. Access to productive resources is a decisive factor in the smooth running and success of the business activity. In this case, SMEs still face barriers in accessing productive resources, shows that SMEs barriers in accessing productive resources contained in the financing and marketing, business and technology network. The above conditions require assistance / facilitation as an effort to improve SME access to productive resources. That science and technology For Export Products for the third year (2016) SME facilitation is needed to do is to provide financing to a particular treatment, both for investment and working capital, which meet the criteria requirements of easy, fast mechanism, and low cost.

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Table 1  
Largest Export Destination For Products Of Industry the country country of destination  
(In US \$)

No	THE COUNTRY DESTINATION	2011			2012		TREND
		2012	2011	2010	2012	2013	
1.	Amerika Serikat	10.360.698.927	11.398.595.162	9.377.063.502	12.188.787.122	14.479.975.202	7,64%
2.	Jepang	9.655.870.228	9.352.503.433	7.034.537.989	10.020.127.349	12.577.409.967	6,16%
3.	Singapura	8.681.643.611	9.726.974.197	7.594.369.632	9.095.966.266	10.717.964.544	3,61%
4.	Rep. Rakyat Cina	5.487.688.681	6.245.179.523	6.002.223.039	8.046.780.413	10.877.243.780	17,61%

5.	India	3.416.027.830	5.437.216.508	4.639.704.813	6.331.123.790	7.426.973.630	18,60%
6.	Malaysia	3.843.657.052	4.819.531.656	4.318.161.359	5.981.207.888	7.063.495.112	15,41%
7.	Belanda	2.646.191.602	3.603.926.417	2.636.784.879	3.375.662.049	4.736.755.397	11,62%
8.	Thailand	2.216.431.237	2.542.123.467	1.973.942.096	3.249.159.611	4.220.699.350	16,57%
9.	Korea Selatan	2.148.050.374	2.714.165.705	2.244.623.243	3.168.599.856	3.719.593.368	13,35%
10.	Jerman	2.106.780.620	2.239.892.926	2.061.184.835	2.564.850.913	2.996.874.091	8,77%
11.	Australia	1.810.148.350	2.043.585.770	1.671.693.481	2.308.840.679	3.008.692.682	12,06%
12.	Pilipina	1.132.129.248	1.291.974.263	1.423.391.439	2.065.293.782	2.337.980.443	21,16%
13.	Hongkong	1.235.362.722	1.273.888.154	1.308.326.261	1.756.890.792	2.152.173.668	15,39%
14.	Vietnam	1.272.592.690	1.554.964.073	1.332.837.075	1.732.839.319	1.970.227.759	10,32%
15.	Italia	1.035.588.924	1.288.752.870	1.201.698.963	1.732.127.395	2.419.036.445	22,05%
16.	Inggris	1.322.781.546	1.366.507.837	1.284.207.542	1.577.397.420	1.607.049.561	5,47%
17.	Uni Emirat Arab	1.312.355.690	1.623.674.927	1.226.258.329	1.450.718.427	1.651.460.648	3,53%
18.	Brasil	701.243.055	919.346.612	779.613.564	1.428.876.827	1.689.637.430	24,61%
19.	Taiwan	1.381.979.380	1.228.608.044	997.013.000	1.421.096.050	1.705.339.699	5,82%
20.	Saudi Arabia	936.767.938	1.186.236.027	950.089.712	1.152.935.838	1.419.701.355	8,36%
21.	Spain	658.744.987	893.493.409	769.553.071	1.141.461.601	1.710.609.687	24,03%
22.	Belgia	1.217.757.864	1.187.757.497	946.428.185	1.105.222.607	1.262.037.260	-0,01%
23.	Perancis	779.262.599	904.985.112	828.860.039	1.081.077.054	1.238.499.618	11,68%
24.	Turki	1.040.972.867	868.247.100	674.121.994	1.033.487.934	1.370.128.543	7,51%
25.	Bangla Desh	619.076.314	819.694.197	767.122.294	967.459.805	1.315.468.438	18,21%
26.	Mesir	573.003.010	755.989.120	669.719.044	820.617.572	1.365.213.548	19,94%
27.	Kanada	522.127.487	599.163.707	483.693.768	701.071.275	909.451.804	13,51%
28.	Rep. Afrika Selatan	539.670.488	597.240.663	471.801.957	669.904.521	1.400.827.113	22,42%
29.	Iran	468.796.418	691.939.729	500.720.932	622.438.134	767.440.771	9,20%
30.	Federasi Rusia	313.734.448	296.200.143	248.180.106	543.221.104	800.130.887	28,13%
	Lainnya	7.023.691.693	8.921.137.680	7.017.914.734	8.679.833.023	11.270.635.350	9,62%

Source: Ministry of Industry in 2014.

Table 2  
Output Target Program Science and Technology For Export Products (IbPE) 2015

Target Activities	Program Science and technology For Export Products	Base Line	2014	2015
Management Organization	Ability to Manage Business	50 %	60 %	70 %
	Leadership Competencies	50 %	60 %	70 %
Human Resources	He number and quality of workforce	50 %	60 %	75 %
	The number and quality of staff Exports	10 %	20 %	30 %
Finance	Ability Proposals Preparation Business Financing	40 %	60 %	75 %
	Develop the ability Financial Statements	40 %	60 %	75 %
	Ability Analyzing Financial Statements	10 %	30 %	60 %
	Implementation of Computerized Accounting System	0 %	0 %	50 %
	Tax Payment Efficiency	20 %	40 %	60 %
	Implementation of Internal Control Systems	20 %	40 %	60 %
Production	Production System Efficiency	20 %	50 %	70 %
	Effectiveness of Production Process	20 %	50 %	70 %
	Timeliness of Delivery of Products	50 %	60 %	75 %
	Materials Cost Efficiency	50 %	60 %	70 %
	Product Certification Quality / Control	50 %	60 %	75 %
Marketing	Ability Develop a Marketing Plan	10 %	40 %	70 %
	Effectiveness Marketing Mix	10 %	20 %	70 %
	Efektifitas Systems and Procedures Ekspot	10 %	20 %	70 %
	Export Market Share	10 %	20 %	70 %

Source: Data processed

Table 3  
T test (Test Partial)

Predictor	Coef	SE Coef	T	P	VIF
Constant	204.402	0.1443	141.62	0.000	

X1	0.00992	0.01502	0.66	0.512	2.1
X2	0.02978	0.02004	1.49	0.144	22.5
X3	-0.00415	0.02168	-0.19	0.849	1.6
X4	-0.005117	0.00620	-0.83	0.414	9.8
X5	-0.02118	0.04092	-0.52	0.607	18.9
X6	-0.01588	0.05199	-31	0.761	20.9
X7	0.05189	0.02701	1.92	0.061	1.4
X8	-0.01588	0.05199	-0.31	0.761	20.9
X9	0.003143	0.001261	2.49	0.017	6.6

Source: Data processed

**Table 4**  
Analysis of Variance

	<b>Coef</b>	<b>SE Coef</b>	<b>T</b>	<b>P</b>	<b>VIF</b>
Constant	2	0.6041	0.1459	141.24	0.000
X2	0.05332	0.01033	5.16	0.000	4.6
X5	-5348	0.02300	-2.33	0.024	4.6

Source: Data processed

# **Birth Weight is Not an Appropriate Indicator for Current Plasma Retinol Level among Female Adolescents**

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## **Abstract**

Vitamin A deficiency (VAD) is still considered as a serious public health problem, including in Indonesia. Although the supplementation of vitamin A program considered succesful among under five year-old children, the prevalence of vitamin A in other group might be high. The research among female adolescents is not as abundant as that in children under the age of five years or in pregnant mothers. The aim of this research is to measure the plasma retinol of teenaged girls and to predict whether birth weight influences the current plasma retinol status of female adolescents in Tanjung Sari sub district, Sumedang district, West Java. This study design was cross sectional from an ongoing cohort study, subjects of which were recruited from the condition applied. 140 female adolescents, with low-birth weight (n = 69) and normal birth weight history (n = 71) are subjects participated in this study. The main finding in this study is that the plasma retinol level (mean  $\pm$  SD) in the low birth weight (LBW) group is  $1.04 \pm 0.37$   $\mu\text{mol/L}$  and  $1.02 \pm 0.4$   $\mu\text{mol/L}$  in the normal birth -weight (NBW) group. The 5<sup>th</sup> percentile of BMI (body mass index) in the LBW group and the NBW is 14.32 kg/m and 15.50 kg/m respectively. The 95 percentile of BMI in the LBW group is 24.03 kg/m<sup>2</sup> and 18.65 kg/m<sup>2</sup> in the NBW group. The most prevalence disease during the research in the LBW group is : ARI (acute respiratory infection) reaching 75.4%, and 6.3% higher in the NBW group. Linier regression was executed to determine whether some variables might influence the plasma retinol level, it was found out that birth weight and nutrient intake from food frequency questionarie (FFQ) are not correlate to current plasma retinol level.

**Keyword:** low birth-weight, vitamin A deficiency, female, adolescents, Indonesia

# Factors that Motivate Malaysian Women to Participate in Informal Entrepreneurship

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## Abstract

This study seeks to identify factors that motivate women to participate in informal entrepreneurship in Malaysia. Based on a combination of desk-based and empirical research, along with engagement with stakeholders, this study provides current knowledge relating to informal entrepreneurship in general and the participation of women in informal entrepreneurship in particular given that there are very few studies in the Malaysian context that focus upon informal entrepreneurship particularly women's informal entrepreneurship. Employing qualitative approach, this study conducted field works in four states in Malaysia, namely; Kedah, Johor, Sabah and Sarawak where a total of 75 informal women entrepreneurs were interviewed. The results of this study reveal that in contrast to the view that women's informal entrepreneurship is motivated only by "involuntary exclusion from the labour market" or "poverty", women's participation in informal entrepreneurship can also be motivated by a wide range of factors which include; to earn a living, to earn more income, interest in doing business, flexible work arrangement, family influence, self-satisfaction, etc. These motivation factors can be classified into personal, skills, family, society and government which are both push and pull factors. This study, therefore, argues that, at least in Malaysia, necessity and choice may be "co-present" in the motives of women entering into informal entrepreneurship. The findings of this study, thus, offer substantial academic insights to informal entrepreneurship research in general and the participation of women in informal entrepreneurship in particular and provide several important recommendations that could be undertaken by policy makers to establish appropriate policies in promoting women entrepreneurship in Malaysia. The limited sample of this study, however, has implications for the generalization of results. Accordingly, more works are needed to further understand issues relating to the participation of Malaysian women in the informal sector as well as the varied forms of their entrepreneurial activities.

**Keywords:** informal entrepreneurship, women, women entrepreneurship, Malaysia

# Should Franchise Restaurant Companies Own So Much Real Estate?

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## **Abstract**

This paper examines the performance effects of corporate real estate (CRE) ownership for franchise restaurant companies. Although several studies have investigated the performance effects of franchise firms (Leleux et al. (2003), Aliouche and Schlenrich (2009), Hsu and Jang (2009); Madanoglu et al., (2011); Aliouche, Kaen and Schlenrich (2012)), no previous study has focused on the performance effects of corporate real estate ownership on franchise restaurant companies. McDonald's was one of the earliest of companies that have used CRE as a source of strategic advantage and as a way to reduce the agency costs associated with franchising. As retail companies seek to assemble valuable CRE portfolios that can generate sustainable competitive advantages, inferior or inefficient locations can significantly undermine their long-term financial performance. Furthermore, the existing franchise research has largely ignored the danger of over-exposure of real estate risk, as highlighted by the most recent global financial crisis. For these reasons and more, CRE ownership has the potential to significantly impact the performance of franchise restaurant companies and this paper seeks to fill this gap in franchise literature. By testing the effect of CRE ownership level on abnormal returns (Jensen's alpha) and systematic risk (beta) of public franchise restaurant companies, we find that CRE level has a significantly negative impact on the abnormal returns and significantly positive impact on the systematic risk of franchise restaurant firms. Considering that non-franchise companies have a higher average levels of CRE ownership, this study provides a partial explanation as to the outperformance of franchise restaurant companies compared to non-franchise restaurant companies.

**Keywords:** Franchises, franchise performance, corporate real estate

## **I. Introduction**

Ever since McDonalds began franchising in the 1950s, interest relating to franchising has grown enormously and gained popularity as a practical form of business. The advantage of the franchising format is that firms can combine the benefits of large-scale brand recognition, product uniformity and organizational design, along with the retailing efforts and incentives of local owners (Klein, 1995). According to "The Economic Impact of Franchised Businesses," a 2007 study conducted by PricewaterhouseCoopers, more than 767,000 franchised businesses generate a total economic output of more than \$1.53 trillion, or nearly 10 percent of the U.S. private-sector economy.



Combining both direct and indirect job activity, franchising generates one out of every seven jobs in the private sector, or nearly 14 percent of the nation's private-sector employment.

The exceptional growth of franchising businesses in recent decades has also drawn substantial research interest. Why do companies franchise? One main theory proposed in the franchise literature is the resource scarcity theory: franchising is designed to provide franchisors with the resources necessary to accelerate growth to reach minimum efficient scale and build brand name capital (Oxenfeldt and Kelly, 1968; Hunt, 1973; Caves and Murphy, 1976). According to this theory, rather than financing growth through internally generated capital, companies choose to franchise as means of raising capital from the franchisees to support rapid expansion. Furthermore, this theory states that companies that seek to grow faster would tend to franchise more. Unlike a company-owned outlet, a franchised unit is operated by a franchisee that pays franchise and royalty fees to the franchisor while investing fixed assets into the unit (Lafontaine & Kaufmann, 1994). Therefore, the franchise form relieves the franchisor of the need to raise capital for growth and expansion (Mcguire & Staelin, 1983).

The other main theoretical approach in explaining why companies franchise is the agency cost theory: franchising provides for an efficient form of organization when the marginal cost of monitoring is greater than the marginal cost of undertaking a franchise agreement (Rubin, 1978; Brickley and Dark, 1987). According to the agency theory, franchising substitutes powerful ownership incentives for the costly monitoring that would otherwise be necessary with employee managers (Rubin, 1978). Since franchisees usually make substantial investments in their units and the unit level profit depends on franchisees' continued best efforts, companies choose to franchise to alleviate their need for costly monitoring (Fama and Jensen, 1983; Norton, 1988). Particularly, as the franchisor expands into rural or unfamiliar markets (Minkler, 1992), agency theory anticipates increased reliance on franchising (Lafontaine and Kaufmann, 1994). Although firm and unit level incentives may be better aligned through franchising than through company ownership, they are still only imperfectly aligned since franchisors benefit from system-wide sales while franchisees benefit from unit level profit (Shane, 1998). Therefore, agency theory acknowledges both the benefits (reduction in monitoring costs) and the costs (free riding) of franchising. Many studies have drawn from both of these theories to identify the rationale and motivation of firms to franchise: lower agency costs, greater access to capital, better alignment of incentives, and superior local market knowledge (Combs and Ketchen, 1999; Combs et al., 2004; Castrogiovanni et al., 2006).

What is less well-established in literature, however, is the performance effects of franchising. The main reason for the lack of research in this area is due to limited availability of performance data, since a large majority of franchising firms are privately held companies. Despite this limitation, several studies have used publicly available information to research the performance effects of franchising compared to their non-franchising counterparts (Roh, 2002; Leleux et al., 2003; Hsu and Jang, 2009; Aliouche and Schlenrich, 2009). The results from these studies show mixed results; however, the most recent studies reveal strong evidence that franchising produces superior financial performance compared to non-franchising companies, particularly in the restaurant industry (Madanoglu et al., 2011; Aliouche et al., 2012).

This paper extends the franchising performance literature by examining the effects of corporate real estate (CRE) ownership on the financial performances of franchise restaurant companies. This topic is relevant for at least four

reasons: first, not only was McDonald's a pioneer in the franchise industry, but also was one of the earliest of companies that have used CRE as a source of strategic advantage and as a way to reduce the agency costs associated with franchising. Second, CRE is closely linked to the business strategy of companies in the retail sector (Gibson and Barkham, 2001). From corporate strategy perspective, the ultimate goal of a company is achieving sustainable competitive advantage through long-term build up of firm-specific resources that are distinctive and difficult to imitate (Barney, 1991; Amit and Schoemaker, 1993). As retail companies seek to assemble valuable CRE portfolios that can generate sustainable competitive advantages, inferior or inefficient locations can significantly undermine their long-term financial performance. Third, portfolio theory suggests that if real estate assets have a different risk profile than that of the operating business, then CRE should provide diversification benefit to firms with significant property holdings. Fourth, the existing franchise research has largely ignored the danger of over-exposure of real estate risk, as highlighted by the most recent global financial crisis. According to Tuzel (2010), real estate risk is likely to be systematic, and CRE investment is riskier than investment in other types of capital for the firm due to slow depreciation of real estate. Therefore, firms with high real estate holdings are hurt more during recessions (Tuzel, 2010).

For these reasons, CRE ownership has the potential to significantly impact the performance of franchise restaurant companies and this paper seeks to fill this gap in franchise literature. This study is organized as follows: the first section reviews the literature on the financial performance of franchise firms; the second section describes the data and the methodology; the third section presents the results and analyzes the findings; the last section discusses the limitations and concludes.

## II. Literature Review

### Financial Performance of Franchises

Within the franchising literature, two main theories are used to explain the economic rationale behind franchising: resource scarcity theory and agency theory. What is unclear, however, is whether franchising is superior to non-franchising, since both types of firms often coexist within the same industry (Combs, Michael, et al., 2004). Studies have shown that large and well-capitalized franchisors continue to franchise, which cannot be explained by resource scarcity theory alone. Several researchers have sought to ascertain whether the reason for continued franchising might be due to better financial performance of franchising compared to non-franchising companies. There are two types of research inquiries within the existing franchising performance literature: first, comparing various measures of financial performance between franchising and non-franchising firms, and second, using the proportion of franchise versus company-owned units as a significant predictor of firm financial performance.

In Roh (2002), the author argued that a better risk-return tradeoff exists for franchises because royalties received from a unit has less variance over time than the revenue and profit of that unit. Furthermore, a firm-owned unit requires capital investment by the firm, which increases the firm's leverage and risk. Using data from publicly listed restaurant firms, Roh demonstrated that firms with higher franchising propensity had lower variation in operating cash flows.

Michael (2002) provided evidence that firms that chose to franchise early acquired market share at faster rate, which produced better financial results compared to non-franchising firms. In Leleux et al. (2003) the authors compared the financial performance of publicly listed franchises in the US to the performance of SP 500 over the period of 1990 to 1999. The authors found that franchising firms had higher cumulative shareholder returns than the SP500 index for nine out of ten years of their study. In Srinivasan (2006), the author investigated the effect of franchising propensity on firms' Tobin's Q, a performance measurement variable. The results were mixed among different groupings within franchising and non-franchising firms.

In Vazquez (2007), the author used a misalignment measure based on the deviation from optimal franchising propensity as the predictor of firm performance. From the study, the author showed that misalignment had a negative relationship with sales growth per unit and a positive relationship with percentage of units discontinued. From these results, the author argued that franchising propensity may not have a direct effect on performance. Aliouche and Schlenrich (2009) compared franchising and non-franchising restaurant firms based on market value added (MVA), economic value added (EVA), return on equity, and shareholder returns measures. Based on their EVA and MVA analyses, the authors found some evidence that US franchise restaurant firms had higher levels of EVAs and MVAs compared to non-franchise restaurants. Hsu and Jang (2009) examined the performances of franchising and non-franchising restaurant firms over the years 1996–2005 using return on assets, return on equity, and Tobin's Q as performance variables. The results showed better performance for franchising firms for all three variables. However, franchising firms did not have a higher Tobin's Q value when controlling for firm size, leverage, advertising, and return on assets. Perrigot (2009) used 123 franchising firms in the hotel and restaurant industries to assess the effect of franchising propensity on worldwide sales. His results indicated that firms with higher franchising propensity have higher worldwide sales.

More recently, in Madanoglu et al. (2011), the authors compared the risk-adjusted financial performance of high franchising firms (over 50% franchising or more) versus non-franchising restaurant firms over the 1995–2008 period, using five different variables: Sharpe Ratio, Treynor Ratio, Jensen's Alpha, Sortino Ratio, and Upside Potential Ratio. The results showed that in each measure, high franchising restaurant firms outperformed their non-franchising counterparts. In Aliouche et al., (2012), the authors investigated risk-adjusted performance of franchise firms over an extended period of 1990-2008 using three different market benchmarks (S&P 500, Russell 2000, and CRSP Index) and two different performance metrics (Sharpe Ratio and Jensens' Alpha). The results showed that the portfolio of all active US-based publicly traded franchise firms outperformed the benchmark market indices on a risk-adjusted basis from 1990 through 2008. In particular, the restaurant firms not only outperformed the market indices, but also had the lowest risk (beta of 0.78) among franchise firms.

### **Corporate Real Estate and Firm Performance**

Corporate real estate (CRE) refers to tangible fixed assets that firms own for operational purposes such as land and buildings. The beginning of CRE research began in the early 1980s when researchers began to notice the significant levels of CRE ownership among companies (Zeckhauser and Silverman, 1983; Veale, 1989; Currie and Scott, 1991). Zeckhauser and Silverman (1983) showed that property represented approximately 25 to 40 percent of

total corporate assets in the USA. Several studies have empirically investigated the effects of such high levels of CRE ownership by companies on their firm performance. In Cheong and Kim (1997), the authors examined the relationship between the rise in real estate prices and the return on investment among firms in Korea. The results based on a yearly cross-sectional test for the period of 1987-1991 showed that the percentage of CRE holdings had no significant impact upon the return on investment.

In Deng and Gyourko (2000), the authors analyzed non-real estate industries for the period 1984-1993 and showed that high CRE ownership levels were linked with negative performance for firms with high betas. Meanwhile, in Seiler et al. (2001) the authors reasoned that since real estate has a different risk profile from that of the core operating business, there could exist potential diversification benefits of CRE ownership. The authors tested for the effects of CRE ownership on the firm's systematic risk (beta) and risk-adjusted returns based on a broad sample of 80 firms from 1985 to 1994. Contrary to expectations, results indicated no significant evidence of diversification benefits of owning high levels of CRE.

In response to the need for more industry level research, Brounen and Eichholtz (2005) looked at the effects of CRE ownership on the risk and return characteristics of public companies using a sample of 5,109 companies from 20 industries based in nine countries during the period of 1990-2000. The authors discovered that the effects were sector specific: the retail industry was more likely to have a closer connection and impact from CRE than other industries.

More recently, Tuzel (2010) explored the connection between CRE and stock returns and found that returns of firms with a high share of CRE exceed that of low real estate firms by 3–6% annually, adjusted for market return, size, value, and momentum factors. The author also found that real estate risk is systematic, and because real estate as a capital base depreciates more slowly than other types of capital, firms with high levels of CRE are more vulnerable to bad productivity shocks and therefore are riskier (Tuzel, 2010).

### **III. Research Design**

As evidenced by the results from Brounen and Eichholtz (2005), CRE is undoubtedly closely linked to the business strategy of companies in the retail sector (Gibson and Barkham, 2001). Because locations that can provide superior access to customers are highly valuable and desirable, firms have strong motivation to secure these places through ownership rather than leasing (Nourse, 1990); otherwise, the economic profit will ultimately pass on to the actual owner of the resource through increased rents. Especially due to high customer switching costs, companies desire to control the value generated by good locations for an extended period of time. Furthermore, because real estate is heterogeneous, the process of accumulating a good portfolio of retail CRE is time-consuming and complex. This “lumpy” process creates a barrier against easy or quick imitation by new competitors, and therefore, a good set of retail CRE can create competitive advantage that can lead to long-term superior financial performance. On the other hand, a lack of CRE ownership undermines the sustainability of competitive advantage. Therefore, CRE ownership may have a significant relationship with the performance of retail companies.

Additionally, there are several reasons why CRE would be significantly related to the business strategy of franchise companies, in particular. First, under the resource scarcity theory, Oxenfeldt and Kelly (1968) proposed

that firms prefer wholly-owned operations to franchising because they can expect higher rates of return from company-owned units. However, the lack of sufficient internally-generated resources to expand rapidly pressures companies to franchise. Therefore, small, growing firms will use franchising to expand until they reach sufficient economics of scale. When firms begin to generate sufficient capital internally, franchisors will turn attention to maximizing each unit's returns by discontinuing franchising at some point and repurchasing its most profitable units from franchisees until the franchise system becomes a company-owned chain. CRE is relevant to the resource scarcity theory because the CRE ownership strategy used by retail companies conflict with the rapid growth motivation underlying the use of the franchise form under this theory. As mentioned previously, while franchise companies may seek to gain short to mid-term growth and performance advantage over competitors through rapid expansion and the use of the franchise form, the CRE ownership strategy seeks to create sustainable long-term performance through the creation of advantageous CRE portfolios that generate barriers to entry. As such, without an effective CRE strategy, the growth and performance of franchises will most likely become unsustainable. Therefore, the question of "who owns and controls the underlying real estate for franchisees" is a critical question for the long-term success of franchisors.

Furthermore, the resource scarcity theory states that once the franchisor reaches sufficient size, it will seeks to maximize each unit's returns by attempting to repurchase the most profitable franchise units; however, this strategic redirection by the franchising firm may not necessarily occur if the franchisor has ownership or control over the underlying real estate of the franchisee units. In fact, the profits of each franchise unit can be indirectly accessed through rent increases by the franchisor, which can provide more stable cash flow and a better risk-return tradeoff than unit level profits. This additional stream of profit generation through CRE ownership allows franchisors to have diversification of income, and since real estate has low correlation with common stocks, companies with a high level of CRE should theoretically receive diversification benefits from owning real estate.

Moreover, CRE can also influence the agency cost theory of franchising. Studies suggest that the ownership of local assets, including CRE, can affect the agency and incentive structures of the forms of franchises (Lutz, 1995). In other words, franchisors can reduce the agency costs associated with monitoring franchisees through the ownership and control over the underlying real estate. Even though the franchise agreement is designed to control the behavior and quality standards of the franchisees, it is imperfect at best to align the interests of franchisors and franchisees. A better alignment can be achieved through the combination of the franchise agreement and the lease agreement which can ensure greater compliance by the franchisees.

The evidence for the strategic importance of CRE in the franchising industry can be illustrated by the following: research into the current real estate control structure among franchises reveal the industry awareness of the importance of CRE. Franchising information is not easily attainable, especially for non-publicly traded companies, but research data on top 50 restaurant franchise brands by number of units indicate that 70% of these top franchisors currently operate by owning or controlling the CRE of their franchise units. This data reveals the existing awareness by the franchising industry on the strategic importance of CRE ownership and control.

This awareness is prominently illustrated by McDonald's, one of the earliest franchise companies that have used CRE strategically to reduce agency costs of monitoring franchisees while diversifying sources of income.

According to the book *Behind the Golden Arches* (Love, 1986), the key to the long-term success of McDonalds is rooted in its ownership of the land and the real estate that their franchisees sit on. The ownership of the underlying CRE offers McDonald's continuing share in the success of its franchisees through increased rents, while maintaining the control necessary to compel franchisees to conform to McDonald's quality standards.

Based on these reasons, this paper's proposition is that:

- P1. There would be a significant relationship between the percentage of CRE ownership levels and systematic risk/excess returns within the franchise restaurant industry.

#### IV. Data Description

A listing of top 500 franchises is published by Entrepreneur each year via a survey and verified with Uniform Franchise Offering Circular. However, most of these franchises are private and returns and balance sheet data are not readily available. We therefore turned to publicly listed franchises as they are required to report their balance sheet and income statement information. The sample consists of companies that are in the Standard and Poor's Compustat database having a primary Standard Industry Classification (SIC) code of 5812 between the years 2003 to 2012. This ten year sample period was divided into two sub-periods of five years each, from 2003 to 2007 and 2008 to 2012 for two reasons: first, this division allows for examination of the impact of the global financial crisis in 2008, and second, since the standard in the finance literature for estimating stable betas is at least 60 months of consecutive monthly returns data.

As long as a company was publicly listed for the entirety of either of the two sub-periods with no missing variables for the analysis, it was included in this study. This process resulted in the following sample sizes for the two sub-periods: 48 firms for the period 2003 to 2007 and 39 firms for the period 2008 to 2012. Following variables were retrieved from the balance sheets: Total Assets, Net Property Plant and Equipment (PPE), Long Term Debt and Year End Market Capitalization. Monthly stock returns were obtained from the Center for Research in Security Prices (CRSP). The CRSP Index's equal-weighted return on the S&P 500 was used as a proxy for market return and 3 month treasury bills were used as a proxy for risk free rate of return.

A major limitation in franchise research is that there is no central public depository of public franchise information. With the help from a private research company (FranData) and by reviewing the annual 10-K filings, a complete listing of franchise restaurant companies was identified from the sample for both sub-periods. In the first sub-period, 24 out of 48 firms were franchise restaurant companies while in the second sub-period, 25 out of 39 firms were franchises.

To quantify the relative CRE ownership, we constructed a corporate real estate percentage (CREP) figure by dividing the book values of a company's Net property, plant and equipment (PPE) by its Total Assets:

$$\text{CREP (\%)} = \frac{\text{Net PPE}}{\text{Total Assets}}$$

This figure was then multiplied by 100 to have a value between 0 and 100. Since it is widely believed in the field of finance that firm size and leverage can impact a firm's stock performance and systematic risk, these variables were also prepared to be included in the research. Leverage is computed as the ratio between long-term debt and total market capitalization as was used by Brounen and Eichholtz (2005).

$$\text{LEVERAGE} = \frac{\text{Long Term Debt}}{\text{Market Capitalization}}$$

The natural log of the year-end market capitalization was used as the proxy for firm size (SIZE).

## V. Methodology

### First-stage regression: stock returns

As a first step in examining the effect that the percentage of real asset holdings has on the firm's systematic risk, a single index model was used to quantify both the historic return and risk characteristics, following the equation:

$$R_{i,t} - Rf_t = \alpha_{i,t} + \beta_{ei,t}(Rm_t - Rf_t) + \varepsilon$$

$R_{i,t}$  denotes the total stock return of firm  $i$  over period  $t$ , which in the current case is monthly.  $Rf_t$  represents the risk-free rate of return over period  $t$ , and the return of a 3 month treasury bill was used as a proxy.  $Rm_t$  is the market return over period  $t$  and is calculated using the equal-weighted monthly returns on the S&P 500 index.  $\beta_{ei,t}$  represents the systematic risk and is the sensitivity of the return for firm  $i$  to the movements in the market during the same period.  $\alpha_{i,t}$  is the intercept in the regression of stock excess returns on the market excess returns.

### Second stage regressions: impact of CREP on Alpha and Beta

As the second step in our analysis, the hypothesis concerning the relationship between CRE levels and systematic risk (beta) and excess returns (Jensen's alpha) are tested using two-stage least squares (2SLS) regression models. In order to examine the effect that the percentage of real asset holdings has on excess returns, a regression is estimated based on the following equation:

$$\alpha_{i,t} = \alpha_0 + \alpha_1 \widehat{\text{CREP}}_{i,t} + \alpha_2 \text{LEVERAGE} + \alpha_3 \text{SIZE} + \varepsilon_t$$

This equation relates a firm's excess return (alpha) to the corresponding CREP, firm leverage (LEVERAGE), and firm size (SIZE). Instead of using the observed CREPs, this model uses predicted (instrument variable) CREP from a reduced form equation. This step in the model is similar to the ones used in Seiler et al. (2001) and Brounen and Eichholtz (2005), and regresses CREP on a constant, the lagged CREP, company size, and firm leverage. This procedure eliminates potential recursivity, multicollinearity, and/or simultaneity bias that exist between leverage and

CREP. In order to examine the effect that the percentage of real asset holdings has on the systematic risk (beta) of the firm, the same regression model is used with  $\beta_{i,t}$  as the dependent variable.

## VI. Results

As a first step into investigating the performance effects of CRE on franchise restaurant companies, we summarized the descriptive trends of CRE ownership percentage, leverage, and market value and revenue growth rates in Table 1. Because of the vast size of one franchise company, McDonald's, the franchise averages were prepared with and without McDonald's to gain a better understanding of the trends. The restaurant industry as a whole has experienced tremendous growth in market capitalization between 2003 and 2012. The restaurant industry experienced annual growth rate of 12% in average market capitalization during these years. On average, franchises have a much higher market capitalization than non-franchises, although this gap has steadily declined.

The average level of corporate real estate as a percentage of total assets has steadily declined for the last ten years, and what started out at average CREP of 68.5% in 2003 has reached 54.2% in 2012. Between the franchises and non-franchises, the CREP is higher on average for non-franchises than for franchises. The importance of CRE for this industry is seen from the fact that restaurant companies invest 60% to 70% of their total assets into PPE. This high level also implies vulnerability and over-exposure to real estate risk for these companies and as a result of the financial crisis in 2007-2008, there is sudden 5% decrease in CREP from 2007 to 2008.

**Table 1**

<b>ALL RESTAURANTS (AVERAGES)</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Market Value (millions)	1717.30	2244.19	2358.52	2834.08	2947.39	2767.54	2984.44	3755.26	4737.34	4760.57
Standard Deviation	5054.91	6748.99	7030.96	8884.32	10780.24	10891.44	10723.25	13026.31	16576.36	15139.34
Leverage (LTD/TA)	18.6%	19.9%	18.3%	19.8%	24.4%	37.7%	33.4%	31.6%	30.2%	30.4%
Standard Deviation	17.2%	20.2%	20.0%	20.4%	23.3%	58.2%	52.7%	49.7%	47.9%	50.8%
CREP (PPE/TA)	68.5%	66.5%	65.8%	67.0%	66.5%	61.2%	60.0%	57.4%	56.3%	54.2%
Standard Deviation	16.5%	16.5%	17.4%	16.7%	18.9%	21.9%	21.5%	21.1%	21.1%	21.0%
Revenue Growth Rate (5 Years)					11.5%					3.0%
<b>FRANCHISES (AVERAGES)</b>										
Market Value (millions)	2533.72	3230.66	3342.05	4063.90	4826.03	3826.19	3881.91	4783.08	5922.10	5586.77
Standard Deviation	6960.67	9073.32	9426.05	11772.29	15185.73	13948.17	13584.66	16483.12	20814.32	18241.59
Leverage (LTD/TA)	20.2%	24.6%	21.2%	23.1%	29.4%	46.0%	42.3%	40.4%	37.5%	38.7%
Standard Deviation	14.4%	22.4%	22.3%	21.5%	25.7%	72.1%	65.5%	61.3%	58.7%	62.5%
CREP (PPE/TA)	64.2%	63.4%	63.6%	64.9%	63.6%	58.0%	56.9%	54.2%	54.1%	53.3%
Standard Deviation	19.7%	20.6%	21.0%	19.9%	21.9%	24.0%	23.4%	22.3%	22.7%	22.7%
Revenue Growth Rate (5 Years)					10.9%					1.1%
<b>NON-FRANCHISES (AVERAGES)</b>										
Average Market Value (millions)	1002.94	1381.03	1497.93	1757.99	1303.58	1210.70	1664.63	2243.76	2995.03	3545.56
Standard Deviation	2368.54	3726.12	3956.36	5281.95	3968.92	2796.28	3838.40	4816.54	6988.60	9249.61
Average Leverage (LTD/TA)	17.1%	15.8%	15.8%	16.9%	20.0%	25.5%	20.3%	18.5%	19.5%	18.3%
Standard Deviation	19.5%	17.5%	17.8%	19.5%	20.5%	24.4%	19.8%	19.9%	22.5%	22.1%
Average CREP (PPE/TA)	72.3%	69.3%	67.6%	68.8%	69.1%	66.0%	64.5%	62.1%	59.5%	55.5%
Standard Deviation	12.4%	11.7%	13.8%	13.6%	15.9%	18.0%	18.1%	18.8%	18.6%	18.9%
Revenue Growth Rate (5 Years)					12.0%					5.7%



In the first set of regressions, we used the entire sample set of restaurants without regard to franchise or non-franchise distinction. The results for both sub-periods are as follows:

**Table 2**  
Regression results with Alpha as the dependent variable

Independent Variables	Years 2003 to 2007	Years 2008 - 2012
Constant		
CREP	-0.303**	-0.298*
SIZE	-0.045	0.077
LEVERAGE	0.226	0.152
Adjusted R2	0.089	0.1

Regression results with Beta as the dependent variable

Independent Variables	Years 2003 to 2007	Years 2008 - 2012
Constant		
CREP	0.297**	-0.019
SIZE	0.127	-0.222
LEVERAGE	-0.191	0.304*
Adjusted R2	0.12	0.1

\* significant at 90%

\*\* significant at 95%

During the years 2003 to 2007, CREP was significantly negatively related to Jensen's alpha for the whole sample. CREP was also significantly positively related to systematic risk (beta) for these firms. During years 2008 to 2012, once again, CREP was significantly negatively related to Jensen's alpha for the whole sample. On the other hand, only leverage was significantly positively related to systematic risk of these firms during this period.

In the second set of regressions, we investigated only the franchise restaurants during these two sub-periods. The results are as follows:

**Table 3**  
Regression results with Alpha as the dependent variable

Independent Variables	Years 2003 to 2007	Years 2008 - 2012
Constant		
CREP	-0.418**	-0.072
SIZE	-0.234	0.006**
LEVERAGE	-0.273	0.585
Adjusted R2	0.17	0.30

Regression results with Beta as the dependent variable

Independent Variables	Years 2003 to 2007	Years 2008 - 2012
Constant		
CREP	0.098	0.368**
SIZE	-0.79	-0.163
LEVERAGE	0.534***	0.738***
Adjusted R2	0.19	0.39

\* significant at 90%

\*\* significant at 95%

\*\*\* significant at 99%

As for the franchise only sample, CREP was once again significantly negatively related to Jensen's alpha during the years 2003 to 2007, and then significantly positively related to systematic risk (beta) during the years 2008 to 2012.

These results as a whole indicate the significantly negative impact of CRE ownership on restaurants and franchise restaurants performances. Not only does CRE ownership dampen the returns, it increases the risk of restaurant firms. Another insight we noticed was that adjusted R2 was much higher for franchise only regressions. Instead of diversifying the risk profile of restaurant businesses, CRE ownership actually seems to increase the overall risk of these firms. These results are in contrast to modern portfolio theory which suggests that if real estate assets have a different risk profile than that of the operating business, then CRE could provide diversification benefit to firms with significant property holdings.

These results also help to explain the downward trend of the average level of corporate real estate as a percentage of total assets during the last ten years among restaurant firms. Despite such performance dampening effect of CRE on franchise restaurants, the recent study by Aliouche et al., (2012) show clear outperformance of franchise restaurant companies compared to non-franchise restaurants. Considering that non-franchise restaurant companies have a higher average levels of CRE ownership than franchise restaurant companies, we believe this study provides a partial explanation as to the outperformance of franchise companies. The reason why franchise restaurant companies perform better than non-franchise restaurant companies may be due to lower levels of CRE, or at least a more efficient CRE strategy by franchise companies.

Lastly, the existing franchise research has largely ignored the danger of over-exposure of real estate risk, as highlighted by the most recent global financial crisis. According to Tuzel (2010), real estate risk is likely to be systematic, and CRE investment is riskier than investment in other types of capital for the firm due to slow

depreciation of real estate. Therefore, firms with high real estate holdings are hurt more during recessions (Tuzel, 2010). Our results support the notion that high levels of CRE investment increases the risk of franchise restaurant firms.

## VII. Conclusion

Most recent studies in franchise performance literature reveal strong evidence that franchising produces superior financial performance compared to non-franchising companies, particularly in the restaurant industry (Madanoglu et al., 2011; Aliouche et al., 2012). This paper extends this stream of literature by examining the effects of corporate real estate (CRE) ownership on the financial performances of franchise restaurant companies. Due to the strategic importance of CRE for retail companies, the restaurant industry shows unusually high levels of CRE ownership. Furthermore, franchise restaurant companies have several additional theoretical rationales for owning high levels of CRE. This study tested the performance effect of CRE ownership levels for franchise restaurant companies and found CRE to be negatively related to Jensen's alpha and positively related to systematic risk for franchise restaurant firms. Perhaps this is reason why the CRE levels have been rapidly declining in the recent decade. The results from this study also show additional insight as to how franchise companies may strategically balance the need for good CRE and the risk of owning too much CRE. The limitation of this study is in the fact that the results from a small sample of public franchise companies may not be generalized into private franchise situations, especially when the franchise industry is dominated by private companies. Nevertheless, this study demonstrates the significance of CRE for franchise restaurants and the need for further research into the link between franchise performance and corporate real estate.

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# Investigating the Consequences of M-Commerce Consumer

## Self-Confidence between U.S. and Korea

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### Abstract

According to a study conducted by GlobalWebIndex in 2012, 37% of South Korean internet users made a mobile purchase in Q4, the rate of mobile purchase adoption was nearly double the rate in the US although US scored much higher on the infrastructure and the environment parts of mobile commerce readiness. The authors hypothesize consumers' psychographics such as self-appraisal for mobile readiness made the difference in actual behavior (i.e., mobile purchase) between two countries. General self-confidence has been frequently cited as an important construct for understanding consumer behaviors and researchers have been tested its role among other important consumer behavior variables. Thus, the purpose of this research is to test the role of mobile consumers' self-confidence in a nomological network and reveal how mobile consumers' self-confidence have effect on actual m-commerce usage behavior. This research will employ survey methodology while using MGSEM for comparing the path models between two countries.

**Keywords:** mobile commerce, consumer self-confidence, international comparison, MGSEM

## I. Introduction

Mobile commerce (m-commerce), the use of handheld wireless devices for purchasing goods and services from any location, is neither new nor diffident thing anymore. We can easily find its emerging relevance to our daily life. It has already taken off. According to eMarketer, M-commerce is the fastest growing form of electronic commerce (e-commerce) while majority of internet users in United States will rely on mobile devices as their primary device for accessing the Internet within five year. In 2013, m-commerce will account for about 16 percent of total US retail e-commerce sales and by 2017, retail m-commerce will climb to well over \$100 billion (eMarketer, 2013).

M-commerce provides a broad range of services including buying a coffee at a café by scanning a mobile wallet (e.g., Starbucks Cards on smartphones), downloading digital music to MP3 players wirelessly, finding local restaurants with GPS enabled mobile devices, monitoring local traffic via tablet PCs, depositing checks into mobile bank accounts with mobile phones, and paying bills on mobile trading portals. Due to the natures of mobile devices, wireless technologies, and location-based applications, m-commerce can provide consumers many benefits, such as efficiency, spontaneousness, and ease of use. It is especially well-suitable for 1) when location-based information is desirable, 2) when time critical needs are present, 3) when spontaneous decisions are demanded, 4) when entertainment needs are craved, and 5) when there are ambitions and mobility related needs (Anckar and D’Incau, 2002). However, due to the natures of m-commerce, mobile consumers are faced with new challenges at the same time, which range extend from personalized location-based marketing messages to targeted threats of mobile devices’ security breach. The former could cause severity of information overload and interruptions of decision making to consumers. The latter could lead identity theft and severe financial losses. M-commerce is changing the way consumers gather, process, and interact with information. Consequently, consumers often feel less-confident with to their decisions and behaviors on mobile marketplace.

Consumer self-confidence, which reflects subjective evaluations of one's ability to generate positive experiences as a consumer in the marketplace (Adelman, 1987), is critical in m-commerce because consumer self-confidence is key to understand consumer behaviors on mobile marketplace where emerging technologies are altering traditional consumer behavior frameworks. For example, under the traditional consumer behavior frameworks, consumers with high self-confidence could show less external information search activities because consumers with high self-confidence are thought to be more confident of their own judgments and consequently less influenced by external information (Wood and Stagner, 1994). Under m-commerce, however, consumers, who constantly access external information from their mobile devices, might show different information search activities to solve immediate buying problems.

M-commerce provides tremendous power to marketers because mobile devices have a much broader reach in terms of possible customers. Mobile devices can capture what consumers do in every second and also can control in very sophisticated way which marketing messages consumers are exposed to. Consumer self-confidence has been used as a distinguishing characteristic of market-segment profiles (Darden and Ashton, 1974). Marketing managers, who would like to utilize these incredible expansion opportunities and need to know how to keep a diffident and picky customer with substantial discretion (it is generally much easier for mobile consumers to find alternatives on their mobile devices than for regular customers to go to the next stores

physically in traditional marketplace) in their mobile marketplace, want to know how consumer self-confidences are different among consumers on mobile marketplace.

A study conducted by Global Web Index revealed 37% of South Korean internet users made a mobile purchase in 2012, the rate of mobile purchase adoption was nearly double the rate in the US. Master Card Mobile Payments Readiness Index study also showed that South Korean consumers were twice more able to execute mobile payment than US consumers in 2012 although US scored much higher in terms of the infrastructure and the environment of the readiness Index than South Korea.

The authors hypothesize consumers' psychographics such as self-appraisal for mobile readiness (i.e., consumer self-confidence) made the difference in actual behavior (i.e., mobile purchase) between two countries. Thus, the purpose of this research is to test the role of mobile consumers' self-confidence in a nomological network and reveal how mobile consumers' self-confidence have effect on actual m-commerce usage behavior. This research will employ survey methodology while using MGSEM for comparing the path models between two countries

The remainder of the paper is organized as follows: first, in the literature review section, we discuss 1) consumer self-confidence concept in consumer behaviors, 2) consumer self-confidence related constructs, and 3) consumer self-confidence measures development. Then, our research model is presented followed by discussions of sample data descriptions, along with data analyses and their results. Concluding remarks are made in the final section.

## **II. Main Body**

### **Literature Reviews**

#### **consumer self-confidence**

Understanding consumer behavior is critical to marketers. Many factors, including demographics and prior product class experience, have been studied in an attempt to understand consumer behaviors. Among the factors, consumer self-confidence has been considered a crucial element to understanding consumer behaviors (Bearden et al, 2001).

Researchers have defined consumer self-confidence 1) as the extent to which an individual feels capable and assured with respect to his or her marketplace decisions and behaviors, and 2) as a relatively stable self-appraisal that is assumed to be readily accessible to the individual because of the pervasiveness of consumer activity in everyday life (Bearden et al, 2001).

Although there are slight disagreements among the definitions, consumer behavior studies seem to agree upon that consumer self-confidence is a trait as an individual difference, but it is derived from more basic traits. There are three major theories in personality study: 1) psychoanalytic theory (believes that personality is derived from conflict between the hedonistic demand of the id as biological needs and the moralistic prohibitions of superego as societal norms and services), 2) socio-psychological theory (suggests that human behavior results from interpersonal orientations such as compliant, aggressive, and detached), and 3) trait-factor theory (assumes that personality comprises pre-dispositional and quantitative attributes called traits). Basic traits and consumer self-confidence are different since a trait is seen more from other person's viewpoint (e.g., psychologist's

observation) while consumer self-confidence are formulated from an internal standpoint. Each trait should be conceptualized as a facet of a person. So, it is difficult to see as a combined system. In the other hand, consumer self-confidence is viewed as a multifaceted disposition (Adelman, 1987). Moreover, while basic traits (e.g., self-esteem, perceived control, and dominance) are more global and central dispositions, which are enduring across-situational individual differences, consumer self-confidence is considered as a secondary disposition that is more closely related to consumer phenomena. In other words, consumer self-confidence represents product- or situation-specific confidence (Bearden et al, 2001).

Bearden et al (2001) argued that consumer self-confidence results not only from more basic traits but also from the collection of the individual's prior marketplace experiences. They called this type of consumer self-confidence (from the collection of the individual's prior marketplace experiences) as general consumer self-confidence. General consumer self-confidence could differentiate individuals within product-decision categories and purchase experiences. Consequently, general consumer self-confidence could predict individual tendencies across product- or situation-specific conditions. And, even in instances where the level of product- or situation-specific confidence may be low for most consumers, general consumer self-confidence will still vary across individuals.

Gerbing, Hamilton, and Freeman (1994) also conceptualized consumer self-confidence as a multidimensional concept consisting initially of two higher-order factors. The two higher-order factors are consumer self-confidence (1) to make effective decisions; and (2) to protect himself or herself from marketing tactics. These two higher-order factors are also consistent with the most frequently studied roles of consumer self-confidence in the consumer behavior and marketing literature. For example, Park et al. (1994) and Wright (1975) propose that self-confidence operates as an antecedent to marketplace choices and subjective knowledge perceptions. Likewise, Luce (1994) and others relate self-confidence to the individual's ability to protect himself or herself from harm under emotional strain and to resist persuasive attempts emanating from others in the marketplace.

#### **computer self-efficacy**

From the IT perspective, using mobile devices to buy a product or service by itself is an effort involving operating mobile technology. So the mobile consumer's computer self-efficacy might be an important factor. The construct self-efficacy from the psychology literature in general, and computer self-efficacy (Compeau and Higgins, 1995) in particular may explain the mobile consumer's intention and behavior. Generally, self-efficacy is assumed to represent the evaluative component of one's self-evaluation of one's abilities and performance in the marketplace. In general, high self-efficacy should enhance consumer self-confidence, and thus self-efficacy scales should have a modest, positive relationship with measures of consumer self-confidence.

The construct computer self-efficacy (CSE) denotes people's overall judgment of their abilities of operating computers for different tasks (Compeau and Higgins, 1995; Marakas et al, 1998). CSE has been examined as an antecedent for dependent variables such as computer performance and outcome expectation. Some factors that affect CSE include task complexity, personal innovativeness in IT, computer anxiety, and prior experience. CSE has been investigated for its effect on computer training and education (Gallivan et al, 2005). CSE is also studied as a factor in an integrated theoretical model to forecast whether users will continue using



World Wide Web (Hsu et al, 2004). In the context of online electronic service, Internet self-efficacy has been examined for its impact on user acceptance (Hsu and Chiu, 2004a). Integrated with a decomposed theory of planned behavior, another study evaluates the role of CSE for predicting users' continued usage of electronic service (Hsu and Chiu, 2004b).

E-Commerce consumers have duo roles of both shoppers and information technology users (Cho and Park,2001). Therefore, we argue that computer self-efficacy affects mobile consumers' online purchase intention and behavior. In the E-Commerce context, previous research found constructs similar to Internet self-efficacy play important roles. For example, general web apprehensiveness is negatively correlated with the amount of time spent online (Susskind, 2004). Moreover, comfort level with the web has a positive correlation with Internet shopping tendency (Mauldin and Arunachalam, 2002).

One factor closely related to the Internet self-efficacy construct is users' web experiences. Internet users' web experiences affect their trust in E-Commerce (Corbitt et al., 2003) Compared to the traditional shopping experience at physical stores, online shopping experience is more complex (Constantinides, 2004). Online shopping process involves various tasks such as browsing, searching, selecting, comparing and evaluating information (Constantinides, 2004). Thus, mobile consumers with different levels of technology experiences may exhibit different patterns of behavior.

#### **perceived risks**

In the recent years, as the Mobile Technology becomes easier to use and broadband Internet is more readily accessible, many individuals and businesses move their transactions on mobile devices. The past decade witnessed the tremendous development of Internet and mobile technology, the steady growth of e-commerce and mobile-commerce adoption, and the creation of various innovative business models exploiting the potentials of this technology advancement. Online consumer behavior and e-commerce adoption became important research topics. Technology acceptance model (Davis, 1989) has been applied to the E-Commerce context.

To predict the intention to purchase physical item online, the perceived benefits and perceived risks were found to be significant factors (Cha, 2011). In a study examining the antecedents of the amount spent online, both the consumers experience with online shopping and the comfort level of providing personal information online (privacy concern) were found significant (Spake et al., 2011). However, surprisingly privacy concerns were not significant in predicting online spending (Spake et al., 2011). In another study investigating expert household end users' online behavior, the privacy-active behavior was found not significant in increasing the likelihood of online purchase or subscription (Drennan et al., 2006). However, perceived online risk did have a significantly negative impact (Drennan et al., 2006). In another empirical study, in addition to perceived risk, computer self-efficacy and personal innovativeness were found as significant predictors for the intension to shopping online (Boyle and Ruppel, 2004).

#### **consumer knowledge**

Alba and Hutchinson (1987) define consumer knowledge as having two major components: familiarity and expertise. Familiarity, in this case, is the number of product-related experiences that have been accumulated by the consumer. Expertise is defined as the ability to perform product-related tasks successfully. They also identify five dimensions of expertise: (1) automaticity that reduces the cognitive effort; (2) the

cognitive structure categorization, used to differentiate products, becomes richer, more complete, and more accurate; (3) the ability to analyze information by separating the important and relevant from unimportant and irrelevant; (4) the ability to elaborate and make accurate inferences from limited information; (5) the ability to remember product information (memory).

Consumer expertise represents the individual's ability to perform product-related tasks successfully (Wood and Stagner, 1994). Product expertise includes both the cognitive structure and the processes required to effectively use product information and beliefs stored in memory. As such, expertise, which typically increases as product-related experiences accumulate, reflects product-specific issues (Wood and Stagner, 1994).

### **Consumer Self-Confidence Measure Development**

Researchers have been developed and validated measures to assess consumer self-confidence. Preeminent in this stream of research is the work in marketing of Bearden et al (2001). While empirically establishing a measure of consumer self-confidence, Bearden et al (2001) found that the two-factor higher-order model and the six-factor correlated model provided the best fit to the data when compared with the other models investigated. The two higher-order constructs are Decision-Making Self-Confidence and Protection. The six-dimensions are:

- Information Acquisition (IA): consumer confidence in his or her ability to obtain needed marketplace information
- Consideration-Set Formation (CSF): consumer confidence in one's ability to identify acceptable choice alternatives, including products, brands, and shopping venues.
- Personal Outcomes (PO): consumer confidence in one's ability to meet purchase objectives such that choices are personally satisfying
- Social Outcomes (SO): consumer confidence in one's ability to meet purchase objectives such that choices generate positive outcomes in the form of the reactions of others
- Persuasion Knowledge (PK): consumer confidence in his or her knowledge regarding the tactics used by marketers in efforts to persuade consumers
- Marketplace Interfaces (MI): consumer confidence in the ability to stand up for one's rights and to express one's opinion when dealing with others in the marketplace

Bearden et al (2001) initially identified seven conceptual dimensions (six dimensions above + Information Processing dimension) but Information Processing factor and its items cross-loaded with the IA items and CSF items. The model was revised and then resulted in six factors. The final set of confidence items is depicted in Appendix A along with their dimension labels and factor loadings from Bearden et al (2001)'s Study 3.

### **III. Method**

This research employs survey methodology. The survey that this research uses is shown in Appendix B. This research has two studies. In the first study, we validate the scales that we adopted from Bearden et al (2001) empirically in mobile commerce contexts. In our second study, we compare the role of consumer self-confidence in the nomological network with related constructs of consumer behaviors on mobile marketplace between two countries. We employ CFA for the study one and MGSEM for the study two.

\* Details of Study 1 & 2, Analyses, Results, and Conclusions will be available and presented at the Conference

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### Appendix A

<b>Factor item</b>	<b>Factor loading</b>
Information Acquisition (IA):	
I know where to find the information I need prior to making a purchase	.80
I know where to look to find the product information I need	.82
I am confident in my ability to research important purchases	.62
I know the right questions to ask when shopping	.60
I have the skills required to obtain needed information before making important purchases	.64
Consideration-Set Formation (CSF):	
I am confident in my ability to recognize a brand worth considering	.85
I can tell which brands meet my expectations	.64
I trust my own judgment when deciding which brands to consider	.72
I know which stores to shop	.55
I can focus easily on a few good brands when making a decision	.60
Personal Outcomes Decision Making (PO):	
I often have doubts about the purchase decisions I make	.81
I frequently agonize over what to buy	.67

I often wonder if I've made the right purchase selection	.73
I never seem to buy the right thing for me	.50
Too often the things I buy are not satisfying	.65
<b>Social Outcomes Decision Making (SO):</b>	
My friends are impressed with my ability to make satisfying purchases	.89
I impress people with the purchases I make	.89
My neighbors admire my decorating ability	.53
I have the ability to give good presents	.53
I get compliments from others on my purchase decisions	.68
<b>Persuasion Knowledge (PK):</b>	
I know when an offer is "too good to be true"	.70
I can tell when an offer has strings attached	.73
I have no trouble understanding the bargaining tactics used by salespersons	.62
I know when a marketer is pressuring me to buy	.68
I can see through sales gimmicks used to get consumers to buy	.74
I can separate fact from fantasy in advertising	.61
<b>Marketplace Interfaces (MI):</b>	
I am afraid to "ask to speak to the manager"	.79
I don't like to tell a salesperson something is wrong in the store	.79
I have a hard time saying no to a salesperson	.59
I am too timid when problems arise while shopping	.67
I am hesitant to complain when shopping	.77

## **Appendix B**

### **Section 1 (M-Consumer Self-Confidence)**

Section 1 items are adopted from Appendix A and modified for mobile commerce context. Items will be available upon request.

### **Section 2 (Beliefs, Attitude & Intention toward m-Commerce Systems)**

Using the m-commerce system improves my performance in shopping

Using the m-commerce system increases my productivity in shopping

Using the m-commerce system enhances my effectiveness in shopping

Overall, m-commerce system is useful

My interaction with the m-commerce system is clear and understandable.

It is easy for me to become skillful at using the m-commerce system.

I find the m-commerce system easy to use.

Learning to use the m-commerce system is easy for me.

Using the m-commerce system is a good idea

Using the m-commerce system is a wise idea

I like the idea using the m-commerce system

Using the m-commerce system is pleasant

I plan to use the m-commerce system frequently.

I predict I would use the m-commerce system frequently.

I intend to use the m-commerce system frequently.

I intend to spend considerable time and effort to learn to use the m-commerce system for enhancing my effectiveness.

### **Section 3 (Global Information Privacy Concern & Risk Beliefs)**

All things considered, mobile commerce would cause serious privacy problems.

Compared to others, I am more sensitive about the way m-commerce companies handle my personal information

To me, it is the most important thing to keep my privacy intact from m-commerce companies

I am concerned about threats to my personal privacy today.

In general, it would be risky to give (the information) to m-commerce companies.

There would be high potential for loss associated with giving (the information) to m-commerce firms.

There would be too much uncertainty associated with giving (the information) to m-commerce firms

Providing m-commerce firms with (the information) would involve many unexpected problems

### **Section 4 (Trust & MCSE)**

M-commerce companies would be trustworthy in handling my information.

I trust that m-commerce companies would keep my best interests in mind when dealing with (the information).

M-commerce companies are in general predictable and consistent regarding the usage of (the information).

M-commerce companies are always honest with customers when it comes to using (the information) that I would provide.

I feel confident understanding terms relating to m-commerce systems

I feel confident describing functions of m-commerce systems.

I feel confident trouble shooting m-commerce problems

I feel confident explaining why a task will not run on my mobile device

## **Intergovernmental Management: The Silver Tsunami Effect, an Essay**

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### **Abstract**

This essay aims to examine one of the most important trending discussions in the twenty-first century, the silver tsunami [ages 55+]. For the past ten years government officials have had debates on the impact of a “silver tsunami” in public management. In public management the silver tsunami has been characterized as “a sudden wave of baby boomers retirements that could potentially cripple public management networks.<sup>1</sup>” These discussions have called into question whether public management networks are prepared to accommodate the influx of baby boomers request for retirement and/or early retirement? Alternative questions posed; will the silver tsunami migration cripple the economic landscape in America? This article seeks to examine plausible techniques to minimize harm to baby boomers and the economy. This article parallels intergovernmental management (IGM) and intergovernmental relation (IGR) properties to examine the impending silver tsunami crisis in the American public domain. Finally, this article questions the veracity of age discrimination and antidiscrimination laws.

**Keywords:** silver tsunami, older adults, aging workforce, aging and disability



# **The Use of Environmental Management Accounting in Australia and its Impact on Environmental Performance**

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## **Abstract**

This study examines the influence of contingent variables on the use of Environmental Management Accounting (EMA) and the impact of EMA on environmental performance. A mail survey questionnaire was used to collect data from a random sample of Australian senior managers across various industries. The comprehensiveness of the environmental management system and top management support were found to be associated with the use of EMA. In addition, organisations which used EMA to a greater extent were found to experienced higher levels of environmental performance. The findings provide significant insights into the use and effectiveness of EMA in Australia.

# The Empowerment of Waste Utilization Industry Based on Greenpreneurship

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## Abstract

Recently, global warming has become serious issue and evokes a great challenge faced by humankind. Wastes become one of the contributors to environmental degradation if not managed properly. Independent participation from community is needed to manage the wastes effectively and efficiently. Problems in this study are:

1. What is needed by a community to apply the greenpreneurship based wastes management?
2. How to develop an innovation model to produce wastes based products?
3. What are the necessary equipment and other supporting technologies to realize the greenpreneurship concept?
4. A model with cross sectional method which was performed on the community needed to actualize the greenpreneurship concept?
5. How to develop greenpreneurship spirit in a community?

This study is developed gradually in Yogyakarta. The first year study result shows that Sukunan village residents need training in design and product made from waste, especially Styroform and glass wastes to be used as raw material to make brick, concrete buis, and ornaments. The community also need training in technology model, equipment, greenpreneurship spirit, and managerial concept which are needed to find and seize market opportunities. Thus the researchers develop module and training as well as providing supporting equipments needed by the residents.

**Keywords:** Greenpreneurship, managerial, wastes, training, innovation.

## I. Introduction

Climate change is a serious global issue and pose one of the greatest challenges face by the mankind nowadays. Climate change is a climate long-term shift, such as temperature, precipitation, and wind. Climate change is also commonly referred as global warming, which refers specifically to the increase of earth temperature. The phenomenon of increasing earth temperature is the main cause of climate change. Although climate change can be caused by either natural variation or human activity, scientists concluded that the major cause of climate change is anthropogenic or human behavior (National Research Council; Swim et al., in (Robertson & Barling, 2012). Maloney & Ward (in Milfont, Duckitt, & Zealand, 2006) stated that environmental problems are seen as a phenomenon that caused by maladaptive human behavior. The only way to reduce the environmental problems is done by changing human behavior (Kalantari, Fami, Asadi, & Mohammadi, 2007).

One of the environmental related problems is wastes management. With the rapid advancement of country development leads to the high economic growth, which in turn increases people's consumptions. The increase in consumption also increases the wastes amount that diverse in form and type. In the end, wastes that are not managed properly will have negative effect on health and environment. Despite the fact that wastes have many disadvantages, but if managed by proper system the wastes will provide great advantage. It is because wastes can be processed into useful goods. The wastes advantage cannot be separated from government regulation and the application of science and technology in its management. In fact the wastes management is not a simple task; it requires a lot of effort, equipment, and cost. Thus, people participation is needed in an effective and efficient wastes management.

One of the community that have implemented the independent wastes management in Dusun Sukunan. Dusun Sukunan is located in the area of Desa (village) Banyuraden, Kecamatan Gamping (subdistrict), Kabupaten Sleman (district), Daerah Istimewa (special region) Yogyakarta Province. Dusun Sukunan community began to implement the environment oriented behavior by implementing the principle of 3Rs (Reduce, Reuse, and Recycle) in managing their wastes. Every house of this community dusun has provided four plastic bags to collect and separate the wastes. The wastes are separated into four categories, they are: plastic wastes, paper wastes, metal and glass wastes, also hazardous and poisonous wastes. By utilizing *dasa wisma* (a group consists of ten housewives) groups, the wastes were collected in a temporary shelter that separated into four drums according to the categories. The next step is to process the wastes into useful goods. For example, the household's organic wastes such as leftover or the other organic materials were processed into compost by using composter. This process is done by the community. Their composter development is known as Furnace Model Composter. But nowadays the composters are rarely used at the household level. The community then switched to waste management with a biopori aperture because it is considered to be more efficient and practical. Biopori aperture is used to avoid puddles during the rainy season. The purpose is to improve soil ability to absorb water and cover it with organic wastes to produce compost. The organic wastes that were placed in the aperture can feed the soil fauna that help in creating the soil pores. The plastic wastes, paper wastes, and metal and glass wastes are recycled into useful crafts, such as bags, hat, and vest. The glass and styrofoam wastes are utilized to make brick.

The independent wastes management in Dusun Sukunan community is well functioned up to this day. However, there are several points that want to be developed in order to utilize the wastes management and

village economic condition. In addition, explaining about the greenpreneurship concept or environment-oriented entrepreneurial spirit will be very useful for Dusun Sukunan community, thus their motivation in managing the environment with proper system will improve as well. They are still using simple equipment in processing the wastes. Most of them use their personal equipment in the further process. In addition. They are still not taking the opportunities to develop their products because of their lack understanding of market access, market opportunities, and their entrepreneurship spirit that has not been honed properly.

Considering the background problems, thus we can conclude that the problems of this study are: (1) what are the people needs related to greenpreneurship based wastes management?, (2) how to develop the innovation model of wide variety of wastes based products?, (3) what are the necessities and technology needed to realize the greenpreneurship concept?, and (4) how to develop the greenpreneurship spirit among the community?. While considering the constraint and opportunity, thus the purposes of this study are:

1. Developing the greenpreneurship spirit in the community thus it will motivate them in seizing the opportunity.
2. Improve Dusun Sukunan community's skill in creating innovative product to compete in domestic and international market, and so improve in managing natural, social, cultural, and environmental sources with utilizing the wastes as their comparative advantage.
3. Introducing technology by using machines that ease the creation of a better product that will be accepted by the market.
4. Developing a simple managerial skill to manage the people business to be more manageable and professional.

Contribution to science and technology development, the results of this study are expected to apply the concept greenpreneurship as part of an entrepreneurial study base on environment. Technically, this study expected to provide added value for the development of waste products garbage marketability. For Dusun Sukunan community, the main purpose is to improve knowledge, skill, and greenpreneurship spirit of the community, thus they will have the ability in seizing the opportunity, creating a marketable product, and also increasing their family's income while promoting the sustainable environment protection. In the end, Dusun Sukunan people can improve their quality of life along with the whole environment. And the advantage for the institution, this study is expected to create the harmony and integration between university's member and the community as a form of the implementation of the philosophy of university through conducting research and community service. In addition, this study is shown that the university concerned in environmental issues by supporting the pro-environment programs.

## **II. Literature Review**

### **The Wastes Empowerment**

In modern wastes management there are 6Rs (Reuse, Reduce, Recycle, Replace, Refill, and Repair) term. In Dusun Sukunan case we use the term of Reuse and Recycle. The wastes can be reduced by recycling it. Recycle refers to the reuse of the wastes or process it into different useful products. The direct reuse without recycling process is called reuse. Recycle is one of the solid wastes management strategies which consist of assorting, collecting, processing, distributing, and creating wastes based product activities. Shortly, recycle are wastes collection, sorting, cleaning, and processing new material in the production process. This process is

creating the material into different products. This wastes material will be used to empower the community.

Power defined as “the ability to get things done, to mobilize resources, to obtain and use everything to meet the person’s needs” (Kanter, 1977). Power is the main concept of empowerment (Page & Czuba, 1999). Empowerment can be defined as the way people manage to gain a greater control of their live, either by their own efforts or with other people assistance. Empowerment is related to the process, result, and effort to gain the power to affect the world (Staples, 1990). Malliarakis (2010) explained empowerment as the ability to be “who you can be” through your own belief, ability, and do everything under your name.

Empowerment can be divided into three categories, they are individual empowerment-which concerns on what is happening in individual level, community empowerment-which emphasizes the collective process and social changes, and the last is professional empowerment-which sees empowerment as professional intervention to the solution of social problem. Community empowerment program as the effort of a person or organization which based on community environmental potency has a main purpose to improve quality of life of the community by utilizing the available resources and emphasizing social participation principals (Suharto, 2009). Community empowerment success if community become a driving force in deciding the right strategy choices, improve their ability, and independency. The community is not only acts as an object, but also participating in the empowerment effort. Empowerment is considered as a process because of its effort to improve the community ability in gaining the welfare. The purpose of empowerment refers to a level or result that want to be reached by social changes, which are empowering the poor who do not have power, knowledge, or ability in fulfilling their own needs (physic, economy, and social).

The success of community empowerment can be seen through three indicators. First, developing atmosphere or climate that supports a community to be developed; second, strengthening community potency; third, protecting the suppressed one, preventing unbalance competition, and exploitation of the suppressed one (Sumodiningrat, 1996). Empowerment is a tool to gain a goal (means to an end), to strengthen organization capacity in changing the current situation, gaining the power to encourage a major changes that needed by the community (Sutisna, 2015). Community empowerment can be done by mapping the basic needs of the community in the area. Then take the necessary steps to solve their problems by provide non formal training based on the area potency. (Kindervatter, 1979) stated that empowering defined as a person who gains understanding and control of social, economic, or politic powers in order to improve their own dignity in the community.

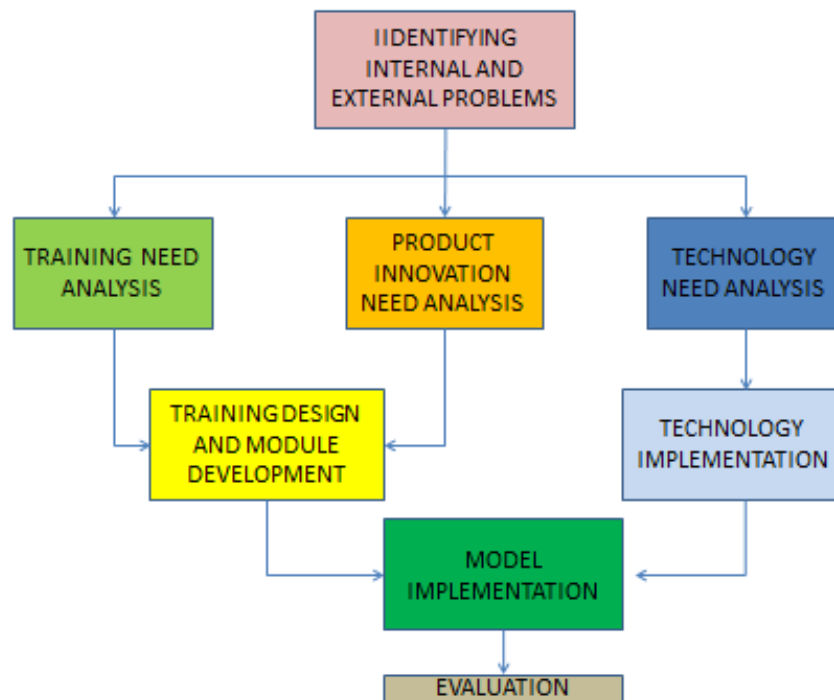
### **Greenpreneurship**

Entrepreneur can be identified into three categories. First, traditional entrepreneur, who is pushed by economic motive (creating economic value for the business owner). The second is entrepreneur who motivated by social motive (creating value for the community). The last is entrepreneur who motivated by ecological motive (creating environment improvement value). The entrepreneur with these three motives categorized as sustainability-driven entrepreneurs (Schlange, 2006). Ecopreneurship combined from the words of eco and entrepreneurship, which mean innovative creation. Ecopreneurship named with various terms such as Greenpreneurship (Schaper, 2002) and enviropreneurship (Keogh & Polonsky, 1988). Schaltegger (2005) defined the ecopreneurship as a corporate which provides eco-friendly products and services. Meanwhile, greenpreneur activist entering the market because they have a strong green value, not only for profit motives.

Another researcher, Isaak (2002) stated that Greenpreneur is an existence of business behavior which committed to sustainability. Bosman (2012) concluded that Greenpreneurship is entrepreneurship behavior which contributes to natural preservation. Thus, greenpreneur is entrepreneur who runs their business based on sustainability principals (Kirkwood & Walton, 2010)

### Conceptual Scheme

This research aimed to (1) developing the greenpreneurship spirit in the community thus it will motivate them in seizing the opportunity, (2) improve the community's skill in creating innovative product to compete in domestic and international market, and so improve in managing natural, social, cultural, and environmental sources with utilizing the wastes as their comparative advantage, (3) introducing technology by using machines that ease the creation of a better product that will be accepted by the market, and (4) developing a simple managerial skill to manage the people business to be more manageable and professional. The conceptual scheme of research is depicted below



**Figure 1: Conceptual Model of Research**

### III. Method

This study used cross-sectional method by studying the study subjects and objects in certain period. This study also used observation, survey, questionnaire, and interview methods to understand the problems and needs of Sukunan's people. The data collecting method used:

1. questionnaire to analyze the community needs,
2. analyzing the answer of questionnaire
3. developed in the training design and module
4. implementation in practice

#### IV. Conclusion

##### Result and Discussion

Considering the process of observation, survey, interview, and distributing questionnaire to the Dusun Sukunan community, it can be concluded

**Table 1 . Organizational Aspects**

ASPECT	DESCRIPTION	ASPECT	DESCRIPTION
Industry Form	Community	Assignment and Authorization Distribution	-
Industry Scale	Small	Assignment Description	-
Industry Type	Creative industry (Recycling)	Industry Planning	-
Industry Goal	Utilization & Profit	Activity Direction	Available
Employee	-	Communication and Coordination	Available
Industry Legality	-	Control	-

**Table 2 . Financial Aspects**

ASPECT	DESCRIPTION	ASPECT	DESCRIPTION
Financial Resources	Saving & Operational Profit	Transaction Receipt	Available
Bank Account	Available	Accounting	Available
Working Capital	Commodities	Financial Planning	-
Inventory	Enough	Financial Control	-
Profit	Stabil	Asset Differentiation	-
Payment System	Direct	Sales turnover in the last three years	Stable but tend to decrease

**Table 3 . Production Aspects**

ASPECT	DESCRIPTION	ASPECT	DESCRIPTION
Production System	Daily	Equipment Planning	-
Raw Material Set Up	Easy	Equipment Control	-
Raw Material Quality	Fluctuative	Production Administration	-
Production Planning	-	Product Quality Control	-
Production Quality Planning	-	Work safety and health insurance	-

**Table 4. Marketing Aspects**

ASPECT	DESCRIPTION	ASPECT	DESCRIPTION
Marketing Area	Local	Marketing Planning	-
Competitor	Available	Distribution Channel	-
Sales planning	-	Product Design Planning	-
Demand Prospect	Good	Promotion	Available
Setting the selling price	Available	Selling skill	-
Product Positioning	-		

The observation result showed that the community is still using simple equipment in processing the wastes into valuable goods. Most of them use their personal equipment in the further process. In addition, Dusun Sukunan community are still not taking the opportunities to develop their products because of their lack understanding of market access, market opportunities, and their entrepreneurship spirit that has not been honed properly. It can be seen from: (1) improper management from planning, organizing, coordinating marketing & control, financial, and production point; (2) lacking of professional in the product design area; (3) the lack of product diversification; (4) lacking of product quality; (5) lacking of market access and cooperation opportunity;

(6) lacking of supporting machines to process the wastes optimally; and (7) lacking of the greenpreneurship knowledge.

From the discussion result with members of Dusun Sukunan community, it can be concluded that there are some opportunities than can be developed from processing the wastes, they are:

1. Processing the styroform into a brick, vase, or other ornaments. The styroform wastes have already processed into simple brick form, thus creating it into more variative ornaments is expected to increase the product selling price.

2. Processing the glass wastes into concrete buis. The glass wastes can be processed into concrete buis that has a great quality.

3. The process of creating organic wastes based bio-charcoal briquette. Bio-charcoal briquette have a large market that has not 100% filled, thus the opportunity to enter the market is very possible.

4. Creating compost fertilizer with the machines. The traditional process of creating the compost fertilizer limits the product quantity and quality.

5. Processing plastic wastes into valuable crafts with modern machines. Currently, the community only process plastic wastes with traditional sewing machines with monotone design, meanwhile the possibility to create more variative products is very large.

Based on the needs analyzed, the machines needed by the community are: (1) processing the styroform wastes (brick printer, vase printer, and ornament printer); (2) processing the glass wastes (glass breaker machine, concrete buis printer); (3) the creating process of organic wastes based bio-charcoal briquette (phyrolized equipment, charcoal breaker, bio-charcoal briquette printer); (4) creating compost fertilizer (thresher, sieving machine); (5) plastic wastes recycled craft (bag and leather sewing machines (Juki). While based on the trait and opportunity, thus the wastes industry empowerment program of Dusun Sukunan can be done with:

1. Developing the Greenpreneurship mental for the community thus they will be motivated to seize the available opportunity.
2. Improving their skill in creating creative and innovative product, thus they can compete in local and international market, and so improve in managing natural, social, cultural, and environmental sources by utilizing wastes as their comparative advantage.
3. Introducing technology by using machines that ease the product creation and products accepted by market.
4. Developing a simple managerial skill to manage people business to be more manageable and professional.

The study result provides some alternatives empowerment through the training needed by the community, such as: (1) financial, marketing, production, and organizational management training, (2) design product training, (3) a training to use modern machines, and (4) a training to develop the Greenpreneurship spirit.

### **Recommendation**

Following are the recommendations proposed by the researchers as a follow-up of this study:

1. Validate the training model and module through the professional one, thus the study design format can be examined. In the end, the study and capability & knowledge transfer process of wastes management can be done easily.



2. Conducting the evaluative study of how far the training provided can improve the human resource capability in the form of Greenpreneurship mental in the community.
3. Monitoring the product quality and economy aspect after this study has been conducted.
4. Providing the feedback and training result for the stakeholder as the beginning step to socialize the training model to wider scope.

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**Appendix 1: Product Sample**



## **Organizational Analysis of Cashew Nut Supply Chain in Wonogiri Regency of Central Java**

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### **Abstract**

Data development cashew nut production in Wonogiri signs of weakness, which is characterized by the development of the area harvested each year showed fluctuating. It can be used as an indicator of instability planting cashew and impact on the supply of cashew nuts in Wonogiri. With Wonogiri image as a producer of cashew nuts and cashews into superior products used actors to bring supply chain cashew products from outside the region Based on BPS data Wonogiri (2014) turned out to supply cashew to Wonogiri growing and largest supply instead of the outside ie areas of Southeast Sulawesi and NTT. According Marimin and Magfiroh (2011), institutional supply chain management relationships or system is systematic work and mutual support among several institutions of a commodity supply chain partnerships. Institutional achieve one or more goals that benefit all parties inside and outside the institution. Institutional patterns of supply chain partnership is a relationship between several actors working in the supply chain that uses the mechanism of a written agreement or contract within a specified period in which there are agreements that will be the rights and obligations of the parties involved. How big is the role of institutional cashew supply chain in Wonogiri in the supply chain is able to contribute cashew and cashew supply solutions in a problem that needs to be examined in this study.

The purpose of this research is (1) the identification of institutional cashew supply chain and the position of each organization in the supply chain of cashew in Wonogiri, (2) institutional analysis as an important action in the supply chain cashew, (3) the acceleration of institutional introduction cashew supply chain cashew. The research method used is a case study on supply chain cashew in Wonogiri district and direct identification with descriptive analysis by analyzing the positive and negative impacts are mainly focused on institutional cashew supply chain in Wonogiri.

The results show that the institutional role in the supply chain is very important cashew in channeling the flow of goods/services cashew and all institutions follow the market price mechanism. The positive impact is found that institutional cashew guarantee business continuity cashew stakeholders although the price and volume of raw materials fluctuate cashew, thus providing confidence in efforts to accelerate the increase in value-added cashew and welfare. For cashew farmers, institutional supply chain could serve as a

reference/damper rates in the price of cashew information that affects the income received. Conclusion this research was the role institutional trading system into an important link in the supply chain soy in Wonogiri, but recommended policies and interventions at local level are still needed in order to control cashew supply chain efficient.

**Keywords:** institutional analysis, supply chain, cashew, acceleration, value-added

## I. Introduction

Cashew is the superior commodity in Wonogiri Regency (Central Java's Local Planning and Development Agency, 2000; Agricultural and Plantation Service, 2001). Cashew nut can be fried for high-nutrition food, while the cashew apple can be processed into such processed food as cashew fruit extract, cashew wine, dry sweets, cashew jam and canned fruit. Cashew has sufficiently good prospect in filling in local, national and international market change. But recently the cashew production from Wonogiri tends to decrease in either quality or quantity. For that reason, the development of cashew nut in Wonogiri District focuses on supporting the economic growth center, with the reason that Wonogiri District has potential to develop cashew and can provide multiplier effect in providing labor and business opportunity in developing processed product. So far in the attempt of optimizing land and yard and community forest and state forest in Wonogiri area has been utilized by the members of society for planting cashew. Wonogiri has sufficiently wide dry land and it gives representation that the dry land farming system has very large quantity to be utilized as farming production factor. In line with the area development based on local potency optimization, Wonogiri area is potential for cashew development. Such the potential is also supported by Wonogiri Regency Government policy emphasizing on development in farming sector, corresponding to Wonogiri Regency Government mission mentioning the environment-friendly and sustainable natural resource management to improve the life quality of society. It can be manifested through development strategy and policy, particularly agricultural sector focusing on improving and on fulfilling food and farmer income and society welfare in the attempt of improving the established and sustainable food stability (Strategic Plan of Wonogiri Regency, 2011).

For market aspect, the potential marketing of cashew production keeps improving. It can be seen from the increasing demand for cashew as export commodity.

Considering information above, the prospect of cashew development in both domestic and global markets is very bright. Domestic cashew market still opens widely, recalling that up to now Indonesian cashew production has not been able to meet domestic need and demand. The increasing demand and the thin global market for cashew show that the global market opens widely for it. The potential market of cashew will open substantial chance for farmers and rural economy.

The marketing of product involves many parties. For that reason, the related parties should be involved in formulating program, from production to marketing processes. The program, according to Bahtiar et al (2002), includes: (1) the socialization of storage technology can be applied by the farmers to avoid disequilibrium between supply and demand, (2) the provision of appropriate production vehicle (appropriate number and type, appropriate quality, and appropriate price and location), (3) the provision of agribusiness loan for cashew commodity, and (4) the absorption of product based on standard quality of product (price guarantee from government/private). In the attempt of improving the production and marketing of cashew, cashew is expected to improve the farmer income and welfare and to support the rural economic growth. In marketing product, the

farmer has not been able to sell directly to large sellers (exporter), cooperatives, or other sellers in provincial city, with the expectation to get high price, but the farmers generally sell their cashew apple product only to intermediary seller or to market (urban distributor or retailer in public market). Thus, the price the farmers accept is relatively low and fluctuating. This condition is less advantageous to the farmers, because there is no feasible price guarantee. For that reasons, there should be a study on the organization of cashew marketing chain or supply chain in Wonogiri Regency. The objectives of research are (1) to identify the organization of cashew supply chain and the position of respective organizations in the cashew supply chain in Wonogiri Regency, (2) the analysis of organization as the important actor in cashew supply chain, (3) the acceleration of introducing the organization of cashew supply chain.

## II. Method

The research method used was case study on the supply chain of cashew in Wonogiri Regency. Regarding the data collection, purposive sampling method was used to select the sub-districts identified as cashew apple center, and five sub-districts were selected based on the data existing in Plantation and Forestry Service of Wonogiri Regency: Manyaran, Jatisrono, Jatiroto, Ngadirojo, and Ngutoronadi. Then, one village was taken purposively from each sub-districts considered as the cashew apple center and the sample farmers were taken as the respondents from each village; next the cashew commercial system was tracked from producer to end-consumer using snowball sampling technique.

The analysis method used was descriptive analysis by observing along the supply chain of cashew from the farmers to the end-consumers, either domestic or industrial consumer, by observing the role of organization along the supply chain channel and analyzing the positive and negative effect primarily focusing on the organization of cashew supply chain in Wonogiri Regency.

## III. Result and Discussion

### Situational Analysis

Geographically, Wonogiri Regency is 182,236.2 ha in width including the row of Thousand Mountains (*Pegunungan Seribu*) constituting the source of Bengawan Solo and adjacent to: Daerah Istimewa Yogyakarta in the west; Sukoharjo, Karanganyar and Magetan Regencies in the North (East Java); Karanganyar and Magetan Regencies (East Java); Karanganyar and Ponorogo (East Java) in the east; Pacitan Regency (East Java) and Indian Ocean in the south.

Viewed from geographic location, the area of Wonogiri Regency lies between 110° 41' EL – 111° 18' EL and 7° 32' SL – 7° 15' SL. Administratively, Wonogiri Regency consists of 25 sub-district, 294 villages/kelurahans and 2,484 hamlets. The distance of Wonogiri Regency from Surakarta is ± 32 km and of Wonogiri from Semarang (the capital of Central Java Province) is ± 133 km. administratively, Wonogiri Regency consists of 294 villages/kelurahans distributed in 25 sub-districts. From such the condition, the map of Regency can be depicted as follows:



Figure 1. Map of Wonogiri Regency and location of sub-district as the research site (colored)

From the map above, it can be seen that the cashew production center in Wonogiri Regency abides in 5 sub-districts: Ngandirojo, Nguntoronadi, Manyaran, Jatiroto, and Jatisrono.

### The potential of Cashew in Wonogiri Regency

The potential of cashew existing in Wonogiri Regency can be seen from the quantity of plant, production and productivity; this condition can be seen in the chart below.

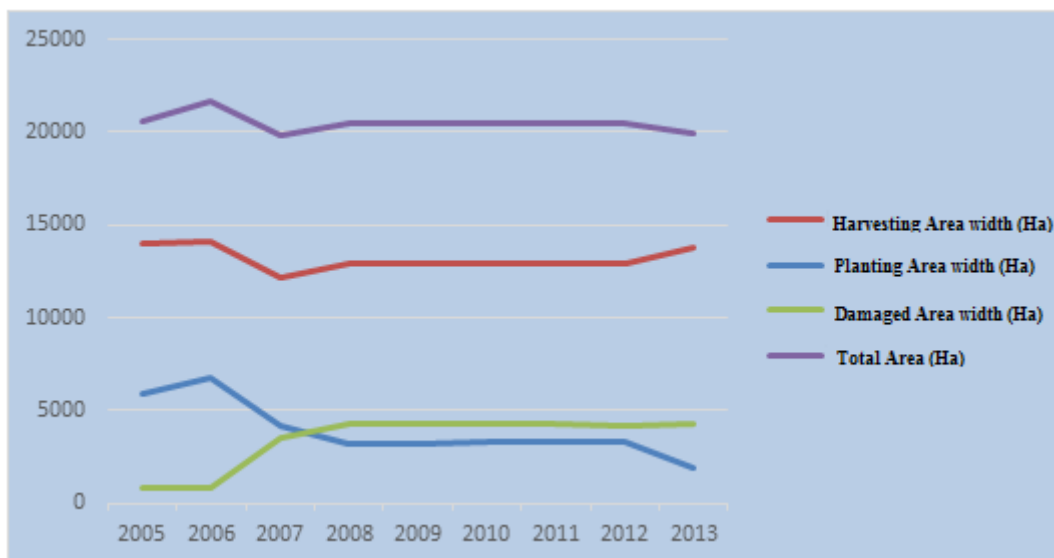


Figure 2:  
Chart of the development of Cashew Harvesting Area width, Planting Area width, Damaged Area width, and Total Area in Wonogiri Regency

From the total area width, it can be predicted the volume of cashew production existing in Wonogiri regency and can be presented in the chart below.



Figure 3. Chart of Cashew Production Development in Wonogiri Regency

### Organizational Analysis of Cashew Supply Chain

Organization is a social-economic phenomenon related to the relationship between two or more social economic interaction performers (actors) involving the rules agreed by the interaction actors accompanied with final analysis obtained from the interaction occurring (Taryoto, 1995). The organization of supply chain essentially analyzes the vertical interaction between the performers in supply chain. Vertically, the organization of cashew farmers is related to, among others, production, marketing, processing, product distribution, and conventional market performer organizations. The supply chain refers to Harland’s opinion (1996) that ‘supply chain management (SCM) is the management of a network of interconnected business involved in the ultimate provision of product and service package required by end consumers’. In the context of cashew commodity market development and cashew farmer welfare improvement, it should be understood well the characteristic and organization of farmers, suppliers and market, the three of which will create the management of supply chain. These three conditions should be conceived as the organization contributing to the management of cashew supply chain in Wonogiri Regency.

The result of research shows that there are three forms of cashew market in Wonogiri Regency: unpeeled cashew, uncooked cashew nut (semi-finished processed product), and cashew nut processed markets. From those three markets, the result of research shows that the organization of supply chain created is follows.

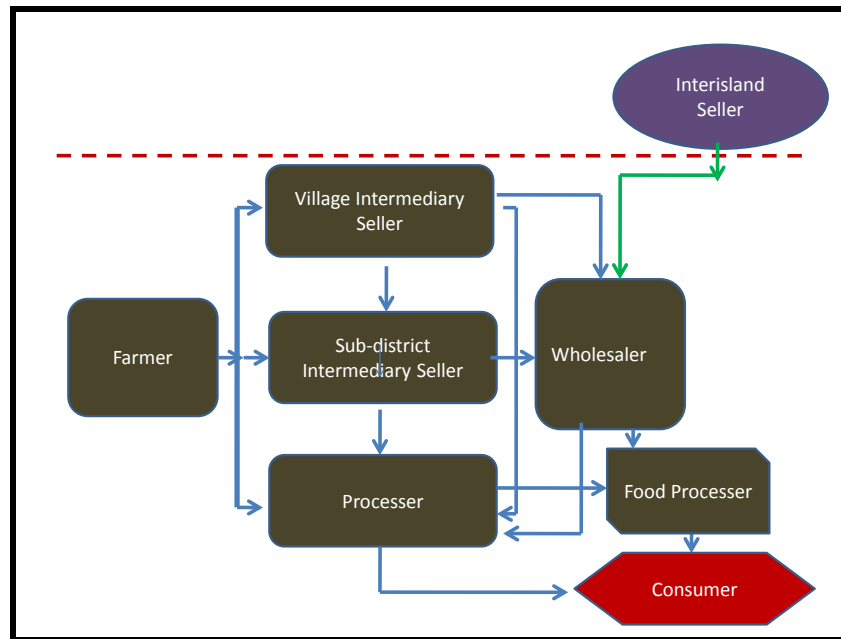


Figure 4: The channel of Cashew Supply Chain in Wonogiri Regency

From the analysis on cashew supply chain, it can be seen the organization of farmers as producer of unpeeled cashew nut sold to distribution organization including: village intermediary sellers, sub-district intermediary sellers, and the processor of unpeeled nut into *wose* cashew (in Javanese “*pengacip*”). These three sellers resell to the wholesalers. In addition to the three sellers as the supplier of unpeeled cashew nut, the wholesaler also get unpeeled cashew nut supply from interisland sellers, usually from South East Sulawesi or from NTT (*Nusa Tenggara Timur*). The cashew nut is distributed from the wholesale to processor (*pengacip*) to be processed into *wose* cashew nut and some wholesalers do themselves the cashew processing. From the processor and wholesalers, the (*wose*) cashew nut is distributed to food processor as the supply or raw material of fried cashew nut and a variety of cashew nut food.

In the term of organization, the farmer as producer, play an important part in the cashew nut supply chain; the farmer serves as the producer that carries out selling activity in the largest supply chain to the villager intermediary seller (67.37%) and the smallest one (12%) to the regency sellers (wholesalers) and the rest is supplied to the sub-district intermediary sellers. The reasons why more farmers have supply chain to villager intermediary sellers are, among others, (1) the farmer get advantages because they do not spend marketing cost, (2) the transaction is made in cash, (3) the distance between the farmers and the location of village intermediary sellers is short (one village) so they do not spend transportation cost, (4) the price accepted is corresponding to the quality offered in which the wet unpeeled cashew nut costs about IDR 5,000/kg- IDR 6.500/kg and dry unpeeled cashew nut costs varyingly from IDR 12,000/kg – IDR 15,000/kg (price during harvest time).

The intermediary seller at village level is the next organization contributing to the second chain in cashew nut supply chain in Wonogiri Regency. This village intermediary seller obtains the supply of unpeeled cashew nut from the farmers surrounding. The result of study shows that (60%) village intermediary seller supplies unpeeled cashew nut to the sub-district intermediary seller, while (15%) do so to the regency intermediary seller (wholesaler), and only 10% do so to the processor (*pengacip*). The reason of small supply to processor is that the processor’s production capacity is small. The reasons of largest supply to sub-district intermediary seller are that



(1) the distance of village intermediary seller from the sub-district one is short (close) (mean < 10 km) and this condition results in small transportation cost, (2) the average price offered is higher than that offered by wholesalers with difference of about IDR 2,000/kg – IDR 3,000/kg.

The sub-district intermediary seller is the third chain in the unpeeled cashew nut supply chain in Wonogiri Regency. This seller get supply of unpeeled cashew nut from the village intermediary sellers existing in the corresponding sub-district, in which one sub-district is supplied by 7-12 villages surrounding. The mean production volume collected by the sub-district seller is 100-290 ton during harvest time. The sub-district intermediary seller supplies (sells) the unpeeled cashew nut to the wholesalers with total volume of 85% while the rest of 11% is supplied to the processor.

The intermediary seller at regency level (wholesaler) is the fourth chain in the supply chain of unpeeled cashew nut in Wonogiri Regency and is the center of unpeeled cashew nut trading, because in addition to getting supply from the sub-district intermediary seller, it also gets supply from outer island (South East Sulawesi, NTT, etc). The result of research shows that 10% of wholesalers (intermediary seller in regency level) supply (sell their product to) the processor and 90% of them process it themselves. For this processing, the wholesalers recruit *pengacip* personnel from the people surrounding with the peeling cost of IDR 7,000/kg-12,000/kg. The peel of cashew nut (waste) can be sold to Jepara for producing cashew oil costing IDR 6,000 – IDR 7,000/kg. From these wholesalers, the cashew nut is distributed to food processing companies (home industry or SME). During harvest time, the cashew nut production capacity at wholesaler level can reach 28-33 tons/day. During non-harvest time in Wonogiri Regency, the need of unpeeled cashew nut in Wonogiri Regency is supplied from outer island. The demand for cashew nut in Wonogiri Regency is on the average 60-70 tons/day and it can reach 100-200 ton/day around Idul Fitri day. The price of uncooked dry cashew nut is IDR 80,000/kg – IDR 95,000/kg, while that of fried one is IDR 95,000/kg – IDR 110,000/kg.

Empirically, referring to the organization of supply chain from Birmingham University and MCL (2002), there are some aspects to consider and to analyze in the organization of supply chain: (1) producer developing pattern in direct access to market, (2) complexity of supply chain network from producer to consumer, (3) dominant supply chain in each development of market type, and (4) each supply chain channel has at least 6 functional stages starting from production, production process, marketing, primary processing, secondary processing, to product distribution factors.

Considering the analysis on the field condition in Wonogiri Regency, it can be seen and analyzed from the first aspect of producer (farmer) development for direct access to market, the result of which shows that the producer found difficulty for direct access to market because the production volume of cashew nut in the farmer-level organization is still relatively small, inhibited by the problems of land ownership, soil type, cultivating technique and competition with other types of plant particularly food plant. Viewed and analyzed from the second aspect of supply chain network complexity from producer to consumer, the result of research based on the elaboration above shows that the network of supply chain is complicated and complex enough because it is inhibited by capital, volume, marketing infrastructure, particularly damage road condition and geographical location of producer relative to market, post-harvest processing technology, etc. Viewed and analyzed from the third aspect of the dominant supply chain in each market development, it can be seen that each market has certain characteristic. It is explained that there are three types of cashew market in Wonogiri Regency, (1) unpeeled cashew nut, (2) uncooked cashew nut, and (3) processed cashew nut markets. In those

three markets, the dominant organization is wholesaler because it can make pricing and processing diversification. This organization has more information compared with other organization in the supply chain, more capital, and bargaining to determine the volume of basic material supply for the cashew nut processing market so that it can make pricing for unpeeled cashew nut. It is this domination that makes the wholesaler playing a central role in the cashew supply chain in Wonogiri Regency. The analysis on the last (fourth) aspect shows that there are 6 functional stages in each channel proving that production, production process, marketing, primary processing, and secondary processing factors in the organization of cashew supply chain in Wonogiri Regency give sufficiently clear representation that everything is still inhibited as mentioned earlier. Thus, the result of research indicates that the three markets need instrument of local government policy to develop the cashew supply chain. The policy that can be applied to the development of cashew commodity in Wonogiri Regency includes the one standing on the area potential (Human resource and land resource) for developing the cashew cultivation, improving the farmer business scale by planting the superior cashew plant, improving competition through improved productivity and added-value, improving the marketing infrastructure, etc.

#### IV. Conclusion and Recommendation

The conclusions of research are that there are 5 patterns of cashew supply chain from the farmer to the end-consumer, the role of organization in cashew supply chain is very important in distributing the cashew product/service flow and all organizations follow the mechanism of market price. The positive effect found is that the cashew organization provides the guarantee of business sustainability for cashew stakeholders despite fluctuating price and volume of cashew raw material, thereby providing trust in the attempt of accelerating the improvement of cashew added-value and welfare. For the cashew farmer, the organization of supply chain can functions as the price reference/muffler in which the information of cashew price affects the income received. The most important conclusion is that the role of commercial organization becomes one of important chains in the cashew supply chain in Wonogiri Regency, but it is recommended that there should be a policy instrument at local level and supervisory intervention to make the cashew supply chain run efficiently.

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# The Conceptual Framework for Behavioral Intention of Medical Tourism in Malaysia

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## Abstract

Medical tourism is a promising industry in Malaysia with its low cost, high quality treatment, short waiting list, good government support, the country promotion as multi-ethnic and Muslim country and the stable political condition. Malaysia as one of the top five medical tourism destinations in the world has distinctive advantages when compared with the neighboring medical tourism countries in Asia. It is an English spoken country when compared to Thailand, has lower medical costs than Singapore, with better infrastructure and security compared to India. However between these three Asian countries, Malaysia has the lowest number of medical tourists.

In this kind of industry with almost similar services that is being offered, the competition is high, stealing market share is important, and the customer spreads everything through word of mouth communication. The main objective of this study is to propose a research model to determine behavioral intention to revisit and recommend the Malaysia's medical tourism to other people. The literature also identifies three probable factors (country image, service quality, perceived value) that could be the causal factors for future behavioral intention in medical tourism. The proposed methodology is the quantitative approach by collecting primary data from international health tourists in Malaysia's hospitals. The data collected will be analyzed using PLS (Partial Least Square). The expected findings will illustrate the factors that could affect behavioral intention which will benefit the policy makers, consumers and the marketers of medical tourism in Malaysia.

**Keywords:** Medical Tourism, Behavioral Intention, Country Image, Service Quality, Perceived Value

## **The increasing productivity and value added for craftsmen gem stone in sangiran sragen through access technology, management, and utilization of resources power Based local wisdom**

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### **Abstract**

Small and Medium Enterprises (SMEs) could get great opportunities of ACFTA implementation. There are three leading sectors of SMEs, namely furniture, garment, and handicraft. Formulation of the problem in this research are:

1. How to design the industrial models of gemstones and fossils souvenirs align with the market taste?
2. How to improve the utilization of the technology used in the low skills and business management of gemstones and fossils souvenirs industry?
3. How to optimize the role of support institutions which are research, education, and banking in the gemstones and fossils souvenirs industry?
4. How to enhance the social capital to achieve a good business climate in the gemstones and fossils souvenirs industry?

This research is a development. Conducted by cross sectional study both the subject and object of the research within certain period of time. The location of this research is in Sangiran, Sragen, Central Java Province.

The results obtained in the first year are the Training Need Analysis for gemstones and fossils Creative Industries in Sangiran, Sragen; the establishment of a prototype model of an appropriate technology with the equipment application used to break and polish gemstones and fossils into value-added products; the development of souvenirs design from gemstones and fossils; the realization of a prototype implementation and evaluation of alternative testing; and the administrative process for registering IPR/patent of the products.

**Keywords:** Productivity, Value-added, Gemstones Artisans, Sangiran, Local Wisdom

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<sup>1</sup> This article was presented at the World Conference on Business and Management (WCBM) 2015 to be held in Seoul, South Korea from 29th June to 2nd July, 2015.

## I. Introduction

Sangiran Museum has changed its location 3 times, firstly in Dayu Gondang Rejo Karanganyar, secondly moving to Krikilan (now used as Village Office [balai desa]). Because of inadequate location, it has been moving to the current location since 1986. At that time the sellers occupied the parking area. The sellers' initiative to apply for space was eventually approved by the Local Government in the form of land. The building was constructed on the sellers' mutual cooperation, but it was collapsed due to the labile land. A cooperative was established on September 29 1999, initiating to apply for the grant of construction material to the Local Government. This application was urged due to the structuring conducted by BPSMP (*Balai Pelestarian Situs Manusia Purba* = Prehistoric Man Site Preservation House) of Sangiran becoming the representative until today. The cooperative contained 35 sellers as its members since 1986 to now.

Precious stone is a mineral, the one created as a result of geological process, the element of which consists of one or more chemical components with high sale price and preferred by the collectors. Precious stone should be polished before made as jewelry. Not all areas contain precious stones throughout world. In Indonesia only some areas contain precious stones including Banten province with its Kalimaya, Lampung with its nice grape and champaca types, and Kalimantan island with its *kecubung* (amethyst) and diamond (polished diamond). Precious stone is named from a through z, classified by its hardness with Mohs scale from 1 to 10 points. The most preferred precious stone in the world is the crystallized one other than Diamond, Emerald, Ruby, and Sapphire. The grape type of agates like *Biru Langit*, *bungur* or *kecubung* originating from Tanjung Bintang, Lampung are currently hunted widely by the collectors because of its crystal quality. In Sangiran Village of Sragen, there are some precious stones as well, but the people have not been able to empower it based on local wisdom not harmful to the nature.

The research attempts taken by colleges in synergy with the related parties to support the improvement of productivity and product's ad value expand the marketing of Indonesian SMSE's products, not only in domestic but also in global markets. The research's findings and innovative applied technology resulting from research centers and colleges are applied to the production and marketing process for the SMSEs' products. Local and Central Governments are expected to implement an integrated policy, and to support the development of Indonesian SMSEs.

Traditional market structuring, business localization supported by adequate access and infrastructure availability partial to the SMSEs can provide add-value and improve the SMSEs' competitiveness in dealing with the incoming foreign products without removing the marketing vehicles of local products mostly originating from SMSEs.

### **Problem statement**

Considering the background of problem above, the problems of research is stated as follows:

1. How is the design of precious stone and fossil souvenir industry corresponding to the market taste?
2. How to improve the technology, skill and business management used in precious stone and fossil souvenir industry?
3. How to optimize the role of supporting institutions such as research center, education and banking in precious stone and fossil souvenir industry?

4. How to increase the social capital in industry and good business climate in precious stone and fossil souvenir industry?

**The objectives in the first year are:**

1. To hold *Training Need Analysis* for the creative industry of precious stone and fossil souvenirs in Sragen Regency.
2. To develop model and module of Creative Industry Entrepreneurship training for precious stone and fossil souvenirs in the attempt of improving the community economy and local wisdom.
3. To develop the expeditious technology prototype, souvenir reengineering and design.
4. To implement the alternative prototype and to evaluate the test
5. To deal with the administration process for Intellectual Property/Patent Right.

The urgency of research is to provide solution to the problems above aiming to improve the understanding of values of local wisdom-based creative industrial work, to model the behavior encouraging the establishment of creative industry and the contribution of entrepreneurship spirit to developing the creative industry. Research efforts have been taken by colleges and related parties in applying the innovative applied technology in production and marketing processes in SMSEs' products. The creative industry of precious stone and fossil souvenirs is selected because it is the superior sector in Sangiran area of Sragen Regency, the small-scale industry absorbing many local laborers.

**Benefit**

**1. Benefit to Science and Technology Development**

- a) Entrepreneurship Science

Developing Entrepreneurship Science theory as a discipline studying an individual's ability of dealing with life challenge through applying creativity and innovation to meet the market need and demand.

- b) Development of precious stone and fossil souvenir design

Improving technically the add-value for creative industry's products so that the precious stone and fossil souvenir's competitiveness improves in the market.

**2. Benefit to Development**

- a) Poverty Handling. Improving the business performance and social-economic life of craftsperson community through improving their potencies in long term will encourage the acceleration of Indonesian economic recovery.
- b) Job opportunity providing. Expanding the job opportunity to the wide society through growing the new entrepreneurs in precious stone and fossil souvenirs.

**3. Benefit to Institution**

- a) Encouraging the existence of Sebelas Maret University of Surakarta in predicting and helping give an alternative solution to the local and global problems in order to support the community's high competitiveness and science and technology-based social economic activity.
- b) Creating the sustainable synergy of potency empowerment between community, government and Surakarta Sebelas Maret University based on link and math and giving input to the adjustment of education curriculum material.

- c) Research attempts taken by colleges and the related parties support the improvement of export and expand the marketing of Indonesian SMSEs’ products, either in domestic or in global market.
- d) In addition, this study identifies the strength, weakness, opportunity and threat occurring in each industry as the foundation on which the development of policy, strategy, and action plan is based on for the development of precious stone and fossil souvenir industry in the attempt of improving the competitiveness.
- e) The goal of research is the widespread policy and strategy of developing industrial area for precious stone and fossil souvenir in the attempt of supporting the acceleration of improvement of local competitiveness over the related parties.
- f) Central and Local Government are expected to implement an integrated policy supporting the development of Indonesian SMSEs.
- g) Traditional market structuring, business localization supported by adequate access and infrastructure availability partial to the SMSEs can provide add-value and improve the SMSEs’ competitiveness in dealing with the incoming foreign products
- h) The attempt of not removing the marketing vehicles of local products mostly originating from SMSEs.

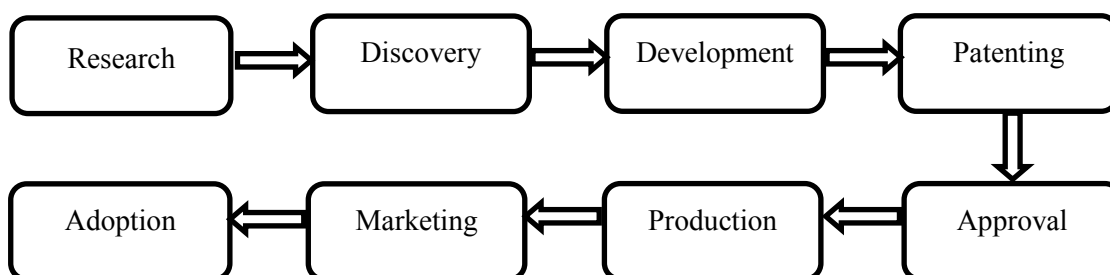
## II. Literature review and conceptual framework

### Entrepreneurship education and creative industry

Entrepreneurship education has been taught as a distinctive independent discipline with theory, concept, and scientific method complete with learning media in the form of training given by both external parties and experience, according to Yohanes (in Trimurti and Nurlaela, 2009). Entrepreneurship education aims to create an entrepreneur with entrepreneurship competency, namely, having knowledge, skill, and entrepreneur mental attitude.

Entrepreneurship, according to Meng and Liang (in Rahmawati and Nurlaela, 2009), is one of keys to economic growth and is development engine. The corporate life sustainability is highly dependent on the entrepreneurs’ tenacity in attaining superiority through their creatively thinking and innovatively behaving abilities (Zimmerer and Scarborough 1996).

Entrepreneurship spirit, according to Pinillos and Reyes (2011), can be said as related to someone’s individualism by achieving his/her personal objective. Innovation in entrepreneurship process, according to Lyer (2004) in Kaur (2014), is as follows:



*Figure 1* Entrepreneurship Process (Lyer, 2004 in Kaur, 2014)

Kaur (2014) also said that in making innovation in business, the main activities to be conducted are as follows:

- a) Improving the existing product design
- b) Inventing new product
- c) Outsourcing R & D and innovating
- d) Innovating based on the process need
- e) Changing industrial and market structure.

The conceptual framework of research can be illustrated as follows.

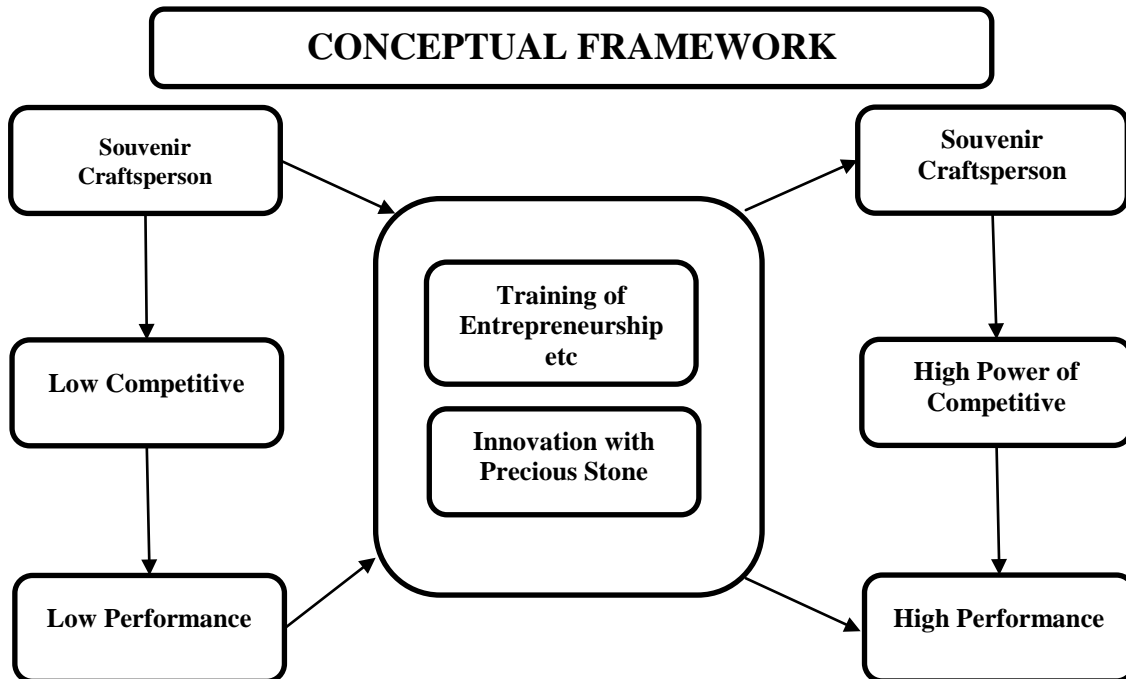


Figure II.2: conceptual framework of research



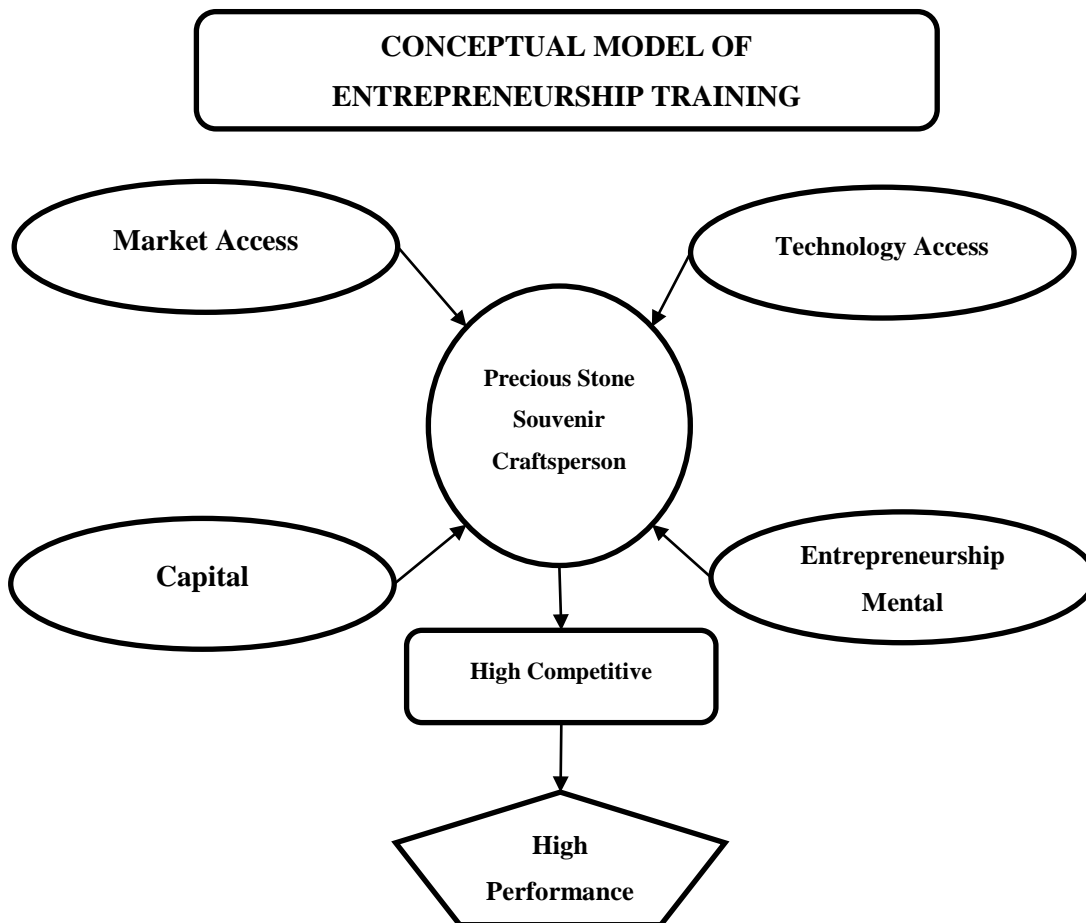


Figure 3: conceptual framework of Entrepreneurship Training

### III. Method

This research was conducted using cross-sectional method by studying the subject and object of research in certain period of time. This study was taken place in Sragen Regency of Central Java Province.

#### Research Diagram

The diagram of research and research procedure is as follow:

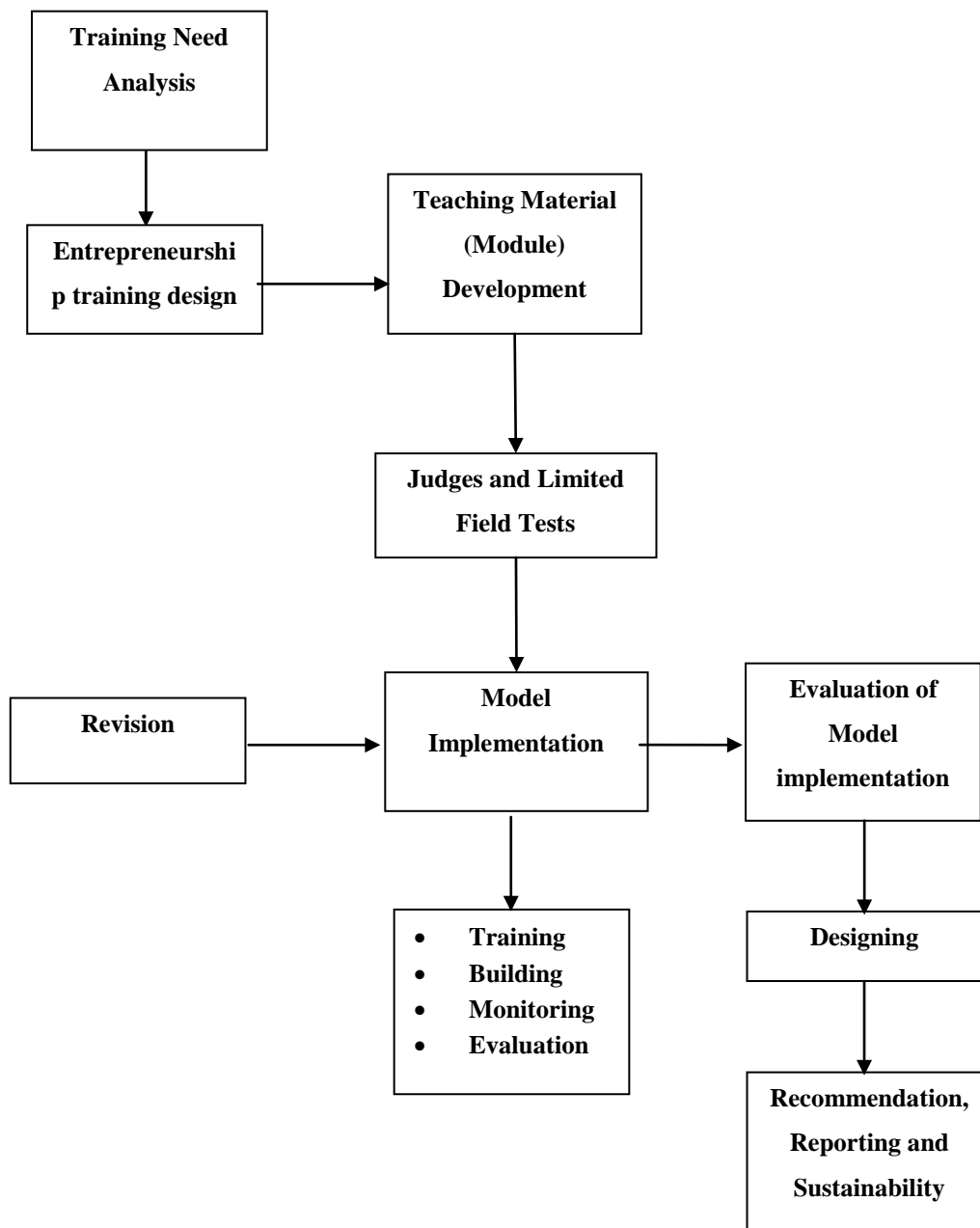
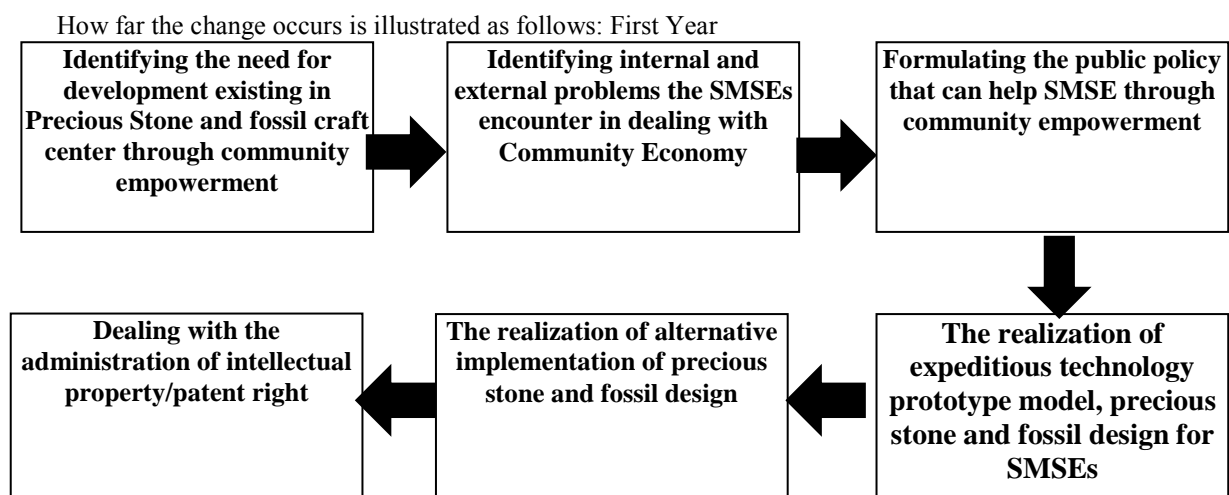


Figure 4 Research Procedure



#### IV. Result and Discussion

This research and development ran smoothly and institutionally (with independent and sustainable prospect) through creating Business Learning Group (*Kelompok Belajar Usaha* = KBU) and continuously facilitated by Mekar Niaga BDS (Business Development Service). About 30 crafts-persons would have four types of life competency: 1) Personal competency, the ability of self-identification, thinking rationally and of appearing with well-established self-confidence. 2) Social competency is the ability of communicating, cooperating, tolerating, and having social care and responsibility in living within the society. 3) Academic competency is the ability of formulating and solving problems encountered by means of critically, analytically and systematically thinking process, and of conducting research, exploring, innovating, and creating through scientific approach. 4) Vocation competency is the one related to weaving craft skill that can be used to work as laborer or in independent business. The crafts-person would have entrepreneurship ability including: the one of managing and organizing business plan, of developing business through creatively and innovatively thinking ability, and of developing business professionally and independently.

Some partners involved intensively in planning, implementing, and supervising this research and development include: a) Village Government Institution/Sub District Head for recruiting the crafts-person, b) Cooperatives and SMSE industrial Service for capitalization, c) Sragen Regency's Tourism Service, d) Surakarta Sebelas Maret University and Yogyakarta State University as research team, and e) Precious Stone SMSE Cooperative in Sangiran Sragen.

The improvement of industrial partnership performance after the application of technology is intended: to improve profit volume, employee number and investment, and expanded marketing area, to improve the skills of crafts-person in planning and managing weaving craft business so that the feasible income is obtained to meet their life need, to grow entrepreneurship insight among the crafts-persons in order to have high working ethos and to produce superior works to be competitive in global market, to improve the crafts-person's ability in managing natural, social, cultural, and environmental resources and to utilize a variety of technologies in craft business area, to have ability of self-conceptualization, understanding others and environment and working in team either formally or informally.

This study was intended to accomplish the applied technology. The method of selecting the science and technology used in the implementation of activity was observation intended to observe the precious stone product and its production process and stone polishing engine in Sangiran Sub District. The research team along with the crafts-persons determined the appropriate concept in designing in order to find out the most preferred design to the consumer, to determine the diversification of new product to be produced. The research team also conducted an observation to find weakness and strength in the application of stone splitting engine and sitting drill, to see the strength and weakness and to reform the financial management, workshop and business operation. Individual facilitation was intended to find out each individual crafts-person's potency to be developed optimally.

From the problems state above, the alternative solution offered to the precious stone crafts-person in Sangiran village was to make them have independent attitude and capable of initiating their own business by having adequate skill. The trainings needed included:

1. Training of export-import, accounting, taxing, cooperative, and marketing management.

2. Training of entrepreneurship mental attitude development,
3. Training of financial management for the participants
4. Training of business management
5. Success Story by presenting the related business practitioners and conducting comparative study in Wonogiri.

### **Setting**

The settings of Service to Society activity were Sangiran Village and Faculty of Economy of UNS (Export-Import laboratory)

Technique of collecting data used for finding out the analysis on the craftsperson's need was to use questionnaire. The instrument used was questionnaire sheet containing a number of written questions the respondents should respond to.

Training Need Analysis was conducted to adjust the content of training and the need of training participants (small employer of precious stone craftsperson). The organization of training need analysis was conducted with small business enterprising concept approach. Small enterprising is the small business managed with small scale enterprise business by applying the functions of management in its business management. The functions of management included planning, organizing, implementation, and control.

The activities of small enterprise basically involve the ones pertaining to production/technology, marketing, financial/capitalization management and business management. From the description of craftsperson's business in the research site, it can be concluded that the constraints inherent to the craftsperson's business were poor access to technology, limited access to marketing, and limited capitalization/finance, and inadequate managerial skill.

In the presence of several weaknesses inherent, the aspect of training need analysis would be related to production, marketing, financial, and business management aspects of craftsperson. The research on Harvard University showed that the key to entrepreneurship success is mostly (85%) affected by entrepreneurship mental and only 15% is affected by technical skill. Referring to the result of study, entrepreneurship mental aspect is the one taken into account in conducting training need analysis.

## **V. Conclusion and recommendation**

### **Conclusion:**

The result of the first year (2015) includes: a) Conducting Training Need Analysis for the precious stone crafts-persons, b) developing model and module of precious stone design innovation and product diversification training, c) applying the stone splitting instrument and sitting drill, d) training of export-import, accounting, taxing, cooperative, online marketing management, and entrepreneurship.

The qualitative indicators achieved in the first year (2015) are: a) developing local potency and building the area through a productive people economic sector, b) transforming the people economic sector building professionally, improving the quality of human resource and its critical, dynamic, and constructive humanity, c) developing learning, working, and endeavoring culture with entrepreneurship insight for the members of society, d) developing education program and life competency in the attempt of developing small-scale, micro-scale

enterprises, and informal sector, and e) holding training of production, entrepreneurship, marketing management, accounting, export-import procedure, tax, cooperative for weaving crafts-persons.

The result of study on training need analysis to identify the appropriate training model in order to improve the business performance through small-scale enterprising concept found the following:

1. There is a need among the precious stone crafts-person for getting training of entrepreneurship with potential need due to 80% standard enterprising not achieved meaning that  $\pm$  80% small-scale employers have not had entrepreneurship spirit and have not applied yet the right and good business management principles.
2. The specification of need can be seen from each aspect and order of problems:
  - a. 100% small enterprises need training to develop entrepreneurship attitude and personality including the ability of leading, self-motivating to be a learner human oriented to the achievement of performance.
  - b. 100% small enterprises need training of marketing management giving knowledge to organize the marketing plan and selling skill.
  - c. 100% small enterprises need training of business financial management particularly related to profit planning and control, healthy practice to separate the personal from business wealth and practical bookkeeping for the small enterprise.
  - d. 100% small enterprises need training of precious stone production management particularly in holding production administration, controlling the quality of production, and understanding the occupational safety and health.
  - e. 100% small enterprises need training of management to improve organizational skill, knowledge on business licensing and business plan organizing skill.
3. From the data of observation conducted on the respondents regarding cultural aspect and social condition of community, it can be identified that an appropriate training model is the one consistent with the participants' requirement that is prescriptive and participative in nature, using facilitator approach.
4. Considering the background of participants' education level in addition to teaching material adjusted with the participants' requirement as suggested in the need analysis study, the participants' intellectuality should be adjusted as well. There are six models developed in this study:
  - a. Module of precious stone production
  - b. Accounting module
  - c. Entrepreneurship module
  - d. Online marketing management module
  - e. Module of export-import procedure and document
  - f. Cooperative taxing module.

### **Recommendation**

As the follow up of product produced in this study, training module and model, in the future, the following measures should be taken:

1. Validating the training model and module through judge test (related expert) and restricted test (several potential users). The training model test will examine whether or not the training format design enables the learning process and transfer of knowledge and skill to craftsman working realm.  
The feasibility test on training model will examine whether or not the training module is consistent with the training participants' need and intellectuality, and enables the participants to participate actively.
2. Evaluating and revising the training model and module that has undertaken feasibility test by the relevant judge and potential user.
3. Applying training model and module that has been evaluated and revised to the entrepreneurship training with the expectation that the affective domain will improve, the entrepreneurship spirit starts to develop, psychomotor domain will improve in the form of precious stone skill and cognitive domain will also improve in the form of improved knowledge on business management.
4. Conducting evaluative research on the extent to which the precious stone-based entrepreneurship training will provide highly economic product and improved performance of craftsman business.
5. Giving feedback and outcome of training to the stakeholders as the initial measure in disseminating the training model into a broader scope.

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Documentation:





## Subsea Asset Integrity Framework for Project Execution Phase

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### Abstract

Asset integrity is a continuous process of knowledge and experience applied throughout the asset lifecycle to manage the risk from design, construction, installation, operation and finally abandonment phases of facilities to maximize benefit of owner whilst safeguarding people, asset, and environment. Traditional petroleum topside facilities have common access from topside. Unlike topside facility, subsea asset has no direct access and has very little human interaction and intervention. Many studies carried on asset integrity during operation phase or life extension project after project team handed over the asset to operation team. Very little emphasis and study carried out about asset integrity during project stage in particular to subsea development which requires higher due diligent because its complexity. Therefore the study will be conducted to determine how project organizations assure subsea asset integrity, to identify obstacles of implementing subsea asset integrity and finally to develop asset integrity framework for subsea asset during project phase. Deduction approach using survey study has been selected for this research. Questionnaires will be used to get response mainly from subsea project delivery organizations. A pilot test will be conducted and then main survey will be carried out. SSPS statistic software will be used to analyze gathered data. As expected outcome, the asset integrity framework for subsea asset during project phase will be beneficial to petroleum companies to manage asset integrity effectively and to avoid major asset failure that could lead to major accident.

**Keywords:** Subsea, asset integrity, maintenance, life cycle



# Implementation of School-Based Management in the Public School

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May, 2013

## **Abstract**

This study aimed to determine the extent of implementation of School-Based Management as assessed by the secondary school teachers in the District of Hinoba-an, Negros Occidental, during the academic year 2012-2013. A descriptive-correlational research design was used utilizing 78 secondary school teachers.

The percentile, the mean, the t-test of independent sample and the Pearson Product Moment of Correlation were used to treat the data.

Findings revealed that the extent of implementation of the School-Based Management as a whole and in terms of leadership and governance, curriculum and instruction, accountability and continuous improvement, and management of resources, was high. There is no significant difference in the extent of implementation of the School-Based Management in terms of leadership and governance, curriculum and instruction, accountability and continuous improvement, and management of resources as assessed by the secondary school teachers when they were grouped according to age, sex, educational attainment and number of years in service. Finally, significant relationships were found when variables were paired and compared with one another namely: leadership and governance and curriculum and instruction, leadership and governance and accountability and continuous improvement, leadership and governance and management of resources, curriculum and instruction and accountability and continuous improvement, curriculum and instruction and management of resources, accountability and continuous improvement and management of resources.

**Keywords:** School-Based Management, Secondary School Teachers

# The Role of Innovation on Batik SMEs' Performance, With Recognition and Training as Moderating Variables

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## Abstract

The objective of this paper is to examine the role of employee - employer training and recognition to employee moderated by innovation and its influence on the batik SMEs' (small medium enterprices) performance. Respondents are employees and employers which represent batik SMEs' from as many as 41 batik SMEs' in Kabupaten Sragen, Central Java. From the data analysis it can be concluded that the interaction between employee-employer training with innovation has significant effect on batik SMEs' performance. This indicates that employees and employers should improve their ability together, in order to increase the batik SMEs' performance in Sragen.

**Keywords:** employee-employers training, employees' recognition, SMEs' performance, SMEs

## I. Introduction

The determinants of organization's performance, in the private companies, government institutions, as well as various manufactures and service companies, has been widely discussed. From the several studies had emerged theories, framework and empirical study which describe the roles of various variables on the companies' performance. Innovation is one of specific factors that can improve companies' performance. From many studies about innovation and its effects on the companies' performance we found that the results vary (Kannebley Jr, Sekkel, and Araújo, 2010). This shown that the connections between innovation and performance, has an immediate effect or vice versa. Innovation in organization, for SMEs usually comes from its human

resource or employee and employer as the owner of business. This is in accordance with Bharadwai and Menon (2000) which states that the effort taken by an individual and organizational system facilitates innovation and creativity in a company. In Resource Based View (RBV), human is one of many resources which provides a scarce resource and has unmatched competitive advantages in the companies' performance (Barney, 1991). Organizational innovation is also an important factor of influence on innovation quality and performance (Belassi & Fadlalla, 1998; Hooff & Weenen, 2004; Jaramillo, 2005). In the SMEs, human resources' potential depends on the owner, where the employer's skill will also determine the level of innovation and performance. Although there were many researches in the field of innovation already, there is few research that try to associate human resource management (HRM) and innovation (Laursen and Foss, 2003), as well as the moderating effect of employee recognition in the effect of innovation on companies' performance. Likewise, the moderation effect of employer-employee training on the relationship between innovation and company performance. The objectives of this research are 1) to find the effect of employee recognition and employee-employer training on the SMEs' performance, and 2) to explore the interaction between employee recognition and employee-employer training with the effect of innovation on SMEs' performance.

## II. Literature Reviews

### **Employee Recognition and Employee-Employer Training, And Company's Performance**

In its daily activities a company employee works to support the company's objectives. Employee supports the company or employer to achieve organizational purpose that has been set. Employees have different motive to do their job. In doing job, employees have different motive which will affect their behavior and work attitude. To achieved development, then effectiveness becomes company's goal, thus employees' performance becomes a very important source for businessmen. Generally, human resources or employees are involved in every management activities of human resource from certain company (Lin, Peng, dan Kao, 2008). A policy in the human resources field will affect the practice and system, which can affect the behavior and performance of the employees (De Cieri, et al., 2008). Human resources policy and practice involves planning, selection and recruitment, training and development, appraisal, recognition, acknowledgement, compensation, working relationship, and health and safety (Schuler and Jackson 1987; De Cieri, et al 2008). The importance of HRM on the companies' performance has been shown in the most of theories and empirical evidences. Human resource practice has positive relation with companies' performance (Barney, 1991). A company will get a competitive advantage if it has a better ability to manage human resource (Barney and Wright, 1998). Investment in the knowledge, skill, and competence will enhance employees' performance (Becker, 1964). There are a lot of empirical studies that had confirmed about the positive relationship between HRM and employees' performance (Zheng, Morrison, and O'Neill, 2006). Participation and empowerment, promotion from the inside, training and skill development or human resource practice has a huge value for an organization (Pfeffer, 1994; Carlson, Upton, and Seaman, 2006). An award for the employee can be carried out in many form, i.e. involve employee in the decision making, and policy on the payoff from company which can motivate the employee to work harder, thus it will increase company's performance.

In the knowledge-based economy nowadays, the ability of SMEs to compete and to enter a wider market

share is dependent on new ideas from the owner in the form of technology and product development. Entrepreneur is considered as an individual, who has creativity, and can achieve vision and create an organization to reach its objectives (Bygrave, 1994). Creativity as a part of thinking process can be obtained and enhanced (Bharadwai and Menon, 2000), through education, training, and experience; which in its turn will increase company's performance. Along with a research conducted by Rosli & Mahmood (2013), there is a positive effect between the employee-employer training on the company's performance. Thus the first hypotheses are:

**Hypothesis 1a:** The increase in company's (SMEs) orientation on the employee-employer training will increase SMEs performance.

**Hypothesis 1b:** The increase in company (SMEs) orientation on the provision of recognition will increase SMEs performance.

### **Innovation, HRM, Employer-Employee Training, and Company's Performance**

Innovation is a process to convert chances into concept, which will be implemented in the practice (Flynn, Doodley, and Cormican, 2003). Innovation can take place on the products, processes, market, design, or services. Product innovation involves improvement of product mix of a certain company that will radically change a product or offer (Craig and Hart, 1992). Innovation process is a re-engineering of a business process (Cumming, 1998), namely internal operation and capacity enhancement of certain company (Otero-Neira, Lindman, and Fernández, 2009). Market innovation refers to dynamic market mix from a company and how the selected market is served by the company, as well as analyzing their purchase preference (John, 1999). The change in consumer's preference and needs does happen as a result from their improved living standard and income level. That is why, company's ability to fulfill the market's needs which is never fulfilled before is needed, as an effort to find the best way to satisfy the customer using a new method in promoting new products. Similarly, with stronger competitions in the market, innovation is needed so that company can still compete competitively in the market. Innovation is considered as a strategy for a company to increase their flexibility, have a competitive advantage, and increase performance (see, Jiménez-Jiménez and Sanz-Valle, 2005). Innovation is seen as a way that directs a company toward competitive advantage and superior profitability (Roberts and Amit, 2003). With innovation, product's quality can be improved, which in its turn will give its contribution to company's performance and finally can increase company's competitive advantage (Garvin, 1987; Forker, Vickery, and Droge, 1996). There is a positive effect of innovation on company performance, thus the second hypotheses is:

**Hypothesis 2:** The higher a company (SMEs) orientation on the innovation, the higher SMEs' performance.

With given same level of innovation initiatives at each company will produce different performance at different company. Since heterogeneity in companies is seen as vital to the economy and the country (Srholec and Verspagen, 2008), scientific works in the field of innovation has been increasingly devoted to the micro level analysis (Srholec and Verspagen, 2008). Certain number of companies that related to innovations, such as, strategy, organizational design, management style and HRM of many dimensions, human resources, is considered as an element of success innovation, because human resource is an element that is involved in the

whole process of innovation (Vracking, 1990).

Design innovation, Filippetti (2011) states that design activities require highly skilled human resources, such as designers, engineers, scientists, and craftsmen. Company that needs innovativeness will need creative employees. These employees should have an element of flexibility and tolerance for uncertainty and ambiguity, risk and responsibility taking behavior, as well as competence and a cooperative method in doing their job (Schuler and Jackson, 1987). All these elements do not come abruptly, but it has to be maintained through education and training. This training is important to develop the skills and knowledge of employees which needed for innovation (Beatty and Schneier, 1997; Mabey dan Salaman, 1995). Empirical studies have confirmed a positive relationship between training provided to employees and innovation (Mark and Akhtar, 2003); Ding and Akhtar, 2001).

Other human resource practices, such as teamwork, communication and appreciation can stimulate innovation. Employees feel recognized if they are allowed to engage in business, including innovation (Hurley and Hult, 1998; Mark and Akhtar, 2003). The other forms of recognitions might come in exchange for financial and non-financial results-based. All forms of awards can accelerate innovation in the company, which in turn increases the performance of the company. From the results of previous studies that have been delivered, there are two hypotheses proposed as follows.

**Hypothesis 3a:** The bigger the interaction between employee-employer training, the bigger SMEs' performance.

**Hypothesis 3b:** The bigger the interaction between recognition and employees innovation, the bigger SMEs' performance.

Training is not limited to the employee, employer as an entrepreneur also needs additional knowledge and competencies. It should be noted that SME is very dependent on its founder or owner in the term of management and operation. The ability of the company to grow depends on their ability to find new ideas (Flynn, Doodley, and Cormican, 2003). In SME, these ideas come, mainly, from employer itself. Thus, employer should understand the importance of new information and ideas in the market, so that they can runs their business efficiently and more importantly always seek for innovation. That is why, the intervention in training and innovation is a need to stay alive, sustainable growth, and business prosperity (Sarri, Bakouros, and Petridou, 2010). Several researchers also found that training and innovation interact to enhance organizational performance (Flynn, Doodley, and Cormican, 2003). This argument leads to the following hypotheses:

**Hypothesis 3c:** The increase in the interaction between training and initiative innovation will increase SMEs performance.

### III. Method

This research is conducted on the batik SMEs in the Sragen. Elected SMEs are have several characteristics such as 1) It has not more than 150 full time employees, 2) It has been operated for at least 3 years, 3) Respondent is the owner of the company or manager, and 4) The main activity of the company is in the field of batik tulis or batik combination in Sragen. All respondents were asked to fill a questionnaire about employee-employer training, innovation and company's performance indicators. There are 41 batik tulis and

combination SMEs which meet the criteria set. Research instrument is tested using validity test and reliability test. Data is analyzed with descriptive statistic and Moderated Regression Analysis (MRA).

#### IV. Conclusions

##### Results

**Research Instrument Test.** 1) Validity test. Validity test is conducted towards four main variables in this research, namely innovation (I), training (T), recognition (R), and performance (P). The result shows the value of KMO Measure of Sampling Adequacy (MSA) in this research is 0.818. Because of the MSA value is higher than 0.5 as well as Bartlett test value with Chi-squares significant at 0.000, thus it can be concluded that factor analysis test can be proceed. Based on the result of validity test with 41 respondents, rotated component matrix shows that every item are valid. 2) Reliability test. Reliability testing is aimed to measure the consistency of statements used. With Cronbach's Alpha value > 0.60 we can conclude that generally all research variables are reliable.

##### Description of the Variables

**Table 1**

**Correlation Result between Variables**

	Mean	S.D	I	T	R	P
Innovation (I)	5.732	1.043	1			
Training (T)	5.902	.853	.279	1		
Recognition (R)	5.244	1.225	.248	.274	1	
Performance (P)	5.745	.812	.675**	.576**	.335*	1

Note: \*\* correlation is significant at 0.01; \* correlation is significant at 0.05

Table 1 shows correlation between variables in this research. Correlation with the highest value is the correlation between innovation and performance.

**Hypotheses Testing.** This research uses Moderated Regression Analysis (MRA) method to test the proposed hypotheses. Table 2 shows 4 regression models tested. Model 1 tests the effect of independent variables that is innovation, training, and recognition on company's performance. In this model, there are two significant variables which are innovation and training, while the effect of recognition on company's performance is not significant.

The second model in the table 2 shows that training and recognition are moderating the effect of innovation on company performance.

**Table 2**

**Moderated Regression Analysis Test Result**

	Model 1 ( $\beta$ )	Model 2 ( $\beta$ )
Innovation (I)	0.541*	-0.195
Training (T)	0.400*	-1.194

Recognition (R)	0.092	1.800*
Innovation*Training		2.783*
Innovation*Recognition		-2.284*
$\Delta R^2$	0.626	0.057
$R^2$	0.626	0.683
<i>Adjusted R<sup>2</sup></i>	0.596	0.637
F	20.659*	15.067*

Source: Processed primary data, 2015

Note: \*  $p < 0.05$

In the first model (Model 1), training and innovation has a significant relationship with company performance. In the second model (Model 2), two interaction effects included in statistical estimation. The results show that, H1b ( $\beta = 1.800$   $p < 0.05$ ), H3a ( $\beta = 2.783$ ,  $p < 0.05$ ) with positive sign, and H3b ( $\beta = -2.284$ ,  $p < 0.05$ ) with negative sign. Even though the hypothesis about Human Resource Management (HRM) that partially supported is HRM that focused on employee-employer training which shows positive performance in the SMEs. When the interaction effects included in the estimation, innovation has no direct effect on company performance. The effect of company performance becomes stronger only when innovation variable interacts with employee-employer training.

This shows that training or development in human resources is very important in company performance, in which without innovation it might be failed to improve company performance, especially in SMEs. This finding is consistent with knowledge based economy (K-Economy) that requires organization to consistently learn, especially for SMEs. Learning is a dynamic process and has a strong relationship with business achievement (Rae and Carswell, 2000). Besides that, innovation is a function of individual's efforts and organizational system that facilitates creativity, which in turn will improve performance (Bharadwai and Menon, 2000). Businessmen acknowledge the importance of innovation training for their self and for organization (Sarri, Bakouros, and Petridou, 2010).

### **Conclusion**

This study asserts that training for employee and employer will improve SMEs performance. Training for employee and employer has a strong interaction with innovation, which in turn will have a positive effect on SMEs performance.

### **Limitation**

Limited number of sample and HRM dimensions, which only cover training and recognition for employees.

### **Suggestion**

HRM practices and employee-employer training is very important for SMEs performance. A competition among companies/SMEs is still limited to local scope. The existence of globalization, the protection in every economic sector is eliminated. Currently, foreign companies and products from around the world are almost free

to enter a country. The competition in Indonesia is tighter, after entering ASEAN Economic Society and world Trade Organization (WTO).

Innovation in every management and operation aspects is inevitable. This study proves that employee-employer training is needed to be done; given the fact that in today economic condition, everything is digital based; employees' and businessmen's knowledge and competence are new resources to increase company competitiveness and performance. With the limitation in resources, SMEs cannot manage all dimensions of HRM.

Some government and private institutions have provided training for potential employee and employer. SMEs have to take this opportunity to send their employees or theirself. Training providers must be careful in identify and designing the right training and employee development program because the importance of knowledge in current innovative economic activities.

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## Natural Colour Batik Handicraft in Sragen (A Study to Improve Handicrafter's Welfare)

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### Abstract

The aim of this research is to increase of the welfare of most people in the research area of the object, ie in Masaran Subdistrict, Sragen, Central Java, by encouraging the batik industry in that area. So far, most people living in Masaran, Sragen, work in the batik industry as labor. This research were conducted in three Small-Scale Medium Businesses (*SMEs*) in that Subdistrict, ie Batik Morinda, Sadewa and Bimo Suci. Those batik companies have advantages in the production process. All of them use natural coloring material (not the chemical stuff). Therefore their products are more natural, environmental-friendly and have high interest in the international market. The research problems are:

- Limited production capacity due to limited production tools.
- The ability of available human resources is the minimum.
- Traditional business management.
- Limited and less inovative batik designs.
- Employers do not have the skills in export

In overall, the pattern used in the implementation method of this activity includes: discussion, workshop / studio work, factory operating, training and mentoring (groups / individuals). The steps in the implementation of science and technology are: team discussion with *the SMEs* regarding the development of batik designs roomates have high interest in the market and unavailable in *the SME*, designing machines (feeder) roomates are needed for production, managerial trainings (accounting, marketing, human resources) and techinal trainings in order to increase of the ability / skill of the workers. Besides, the Efforts to develop the usage of natural coloring materials are more encouraged by assisting the *SMEs* in providing access to the source of raw materials and lab testings. Then, those activities are followed by mentoring so that all activities can be conducted effectively accivities.

**Key words:** batik handicraft, natural color, batik designs, training and mentoring

### I. Introduction

Batik Indonesia is officially recognized by the UNESCO representative included in the list of Intangible Cultural heritage as humans (Representative List of the Intangible Cultural Heritage of Humanity) in Session -4

Intergovernmental Committee (Fourth Session of the Intergovernmental Committee) on Intangible Cultural Heritage in Abu Dhabi. The ministry declared the entry of Indonesian Batik in the UNESCO *Representative List of Intangible Cultural Heritage of Humanity* is an international recognition of the Indonesian cultural one eye, which is expected to motivate and uplift the dignity of batik craftsmen and support efforts to improve the welfare of the people.

Every region in Indonesia both Java and outside Java has natural and cultural richness that can be expressed as a motif. Natural wealth in the form of flora, fauna and landscapes. Sragen is one batik-producing areas in Central Java, today has expanded its technology and design. Amid the rise of modern batik industries that use a lot of synthetic dyes, Sragen still retain the use of natural dyes derived from nature and plants.

Batik craft in Sragen is a heritage that has lasted over 100 years. At first the craft of batik is done by batik workers men and women who work at the company in Surakarta batik. Furthermore, batik workers began work at home as folk craft which then developed into home industry. Batik industry business development Sragen officially began in 1985, is one of the leading sectors of the textile industry is expected to contribute to economic growth after industrial Agricultural and Forestry and furniture.

This research is based on our previous study in the same object.

### **Interpersonal patterns of SMEs**

Each SME has some differences, which lies in the type of product, type of marketing agencies, and consumer segments. In terms of products, SME-1 dominant batik manufacture of a variety of materials with natural dyes with leaf and floral motifs, while both the SME-2 and SME-3 producing batik printing with chemical dyes and natural dyes. SME The market segment for SME-1, SME-2 likewise SME-3 producing batik for the lower class, middle, and upper. One of the SME (SME-1) products are products that are used by the President Susilo Bambang Yudhoyono and family.

In general, the pattern of relationships among SMEs working very well, as seen for example between SMEs often borrow from each other various materials and equipment. For example, when the SME-1 deficiency fabric SME-2 will supply and vice versa, or other materials (wax, evening). Similarly, in terms of equipment and design (screen) among SMEs will complement each other, especially the screen, because to make the kind of long motif usually takes between 5-10 screen.

### **Technical Problems**

Based on preliminary surveys, there are some problems facing SMEs today that need solving are: Internal problems include raw material acquisition, financing, design innovation, and financial management, which includes also the financial administration / accounting. Most SMEs have not been taking notes well, and not attempt to differentiate between personal property assets.

### **1. Business Management**

Forms of organization SME everything is shaped individual effort, while most of the workforce is female. In operation SMEs do not split the treasure so that less effort can determine the actual amount of income, although progress can be seen from the business and assets as well as a means of increasing the number of production processes and the behavior of the large number of marketed. So that SMEs need to get an effective

coaching Financial Management in order to accurately determine the extent of the effort was successfully implemented.

## 2. Wage System

Wage systems in SMEs varies, mostly based on the number of products produced / wholesale.

**Barriers:** no general and uniform rate among SMEs.

To solve these problems in the first year, the research team provided training practically bookkeeping models that can be applied to SMEs.

### Obstacles encountered:

2.1. Because of his efforts have long felt it less difficult to start from the beginning where do bookkeeping or inventory of their assets in a way.

2.2. Most do not understand how essential records and financial statements when his business began to grow rapidly.

## 3. SME Capital

Sources and allocation of funds derived from SME businesses and some of the equity capital of the loan. Allocation of funds to meet the needs of SMEs are equipment, supplies, raw materials, auxiliary materials, labor, and promotion costs.

Delayed obtained information about the SME loan opportunities and do not know how to submit a proposal to get the loan. If managers are less well will make SMEs are less conducive conditions. Overview of SME capital: comparison of own and foreign capital is still relatively balanced. Still need a helping government assistance in product development and financial assistance.

## 4. Raw Materials

Raw materials whose supply is erratic even have to come from outside the city. Raw materials imported batik natural color of Solo and Yogyakarta.

**Barriers:**

SMEs need to get Raw Materials Outer City and inefficient.

## II. Problems of SMEs, Solutions and Target Outcomes

On the whole technical or administrative problems identified by the proposing team in every aspect of SME businesses and SMEs Batik Batik Morinda Sadewa greatly affect the perceived smoothness of a business, and needs to be resolved for three (3) years are:

- Production of scale is limited because lack of means of production.
  - Ability / skill craftsmen minimal human resources.
  - Management businesses are still traditional.
  - Marketing is limited (in terms of network) and the number of competitors.
  - Equipment is traditional or very simple.

There are problems related to the equipment, which at the moment is still quite traditional, given the limited availability of capital so as to reach equipment such as electric stoves, computers for pattern, pattern

table, penglorot tub, bathtub coloring, clothesline permanent, and another canting- others still need the help of stakeholders, particularly Government Sragen.

Problems *skill* and ability of the craftsmen still limited, it is necessary to increase skills and knowledge. Overview of the craftsman or mission is to improve the quality of Sragen batik batik so as not to lose the outside Sragen. It is still always haunt the craftsmen, especially with the implementation of the ACFTA free trade batik Sragen readiness to compete with foreign products remains a problem for craftsmen. However, with good intentions and sincere craftsmen strive to move forward and compete with the products from anywhere. Batik products are most favored by consumers today is the Batik style Sragen.

Human Resources owned by Morinda Batik is very potential. Employees and artisans made up of workers who are young who had the opportunity to go forward and easily scouted. Nevertheless, it is still very lacking ability to require guidance from professional parties or an expert in the field.

While the outcome of the main program for the team is proposing outputs berkaiatan feeder with improved design tools, and the development of design patterns based on local culture (typical motif Sragen).

**Table 1.**  
**Problems of SMEs (Batik Morinda)**

Aspects of the business	Problems
Raw Materials	Raw materials are relatively distant origin
Production	Equipment is still very simple (traditional), so it needs the technology innovation
Process	The process is still limited to the making of batik
Product	Product diversification is limited, so the design needs improvement
Management	Management is familial in nature. a. Human resources management, there has been no regeneration in the manufacture of batik motifs and patterns. Because new mothers handled by Morinda and are elderly. b. Lack of production management competence / expertise specifically in the production process of making patterns, drawing, batik until finishing & dyeing process c. Financial Management, the lack of bookkeeping, though modest, in the business so it will thrive well d. Marketing management, there is no good marketing strategy.
Equipment management	computer information technology and communication media
Marketing	a. The area around and outside Java (Bali, Borneo). b. Marketing still be simple so that needs to be done to develop the market promotion. c. Proses in marketing directed at marketing with multimedia

**Table 2.**  
**Problems of Batik Sadewa and Bimo Suci**

Aspects of the business	Problems
Raw Materials	Raw materials are relatively distant origin

Production	Equipment is still very simple (traditional), so it needs technological innovation:
Process	The process is still limited to the making of batik
Product	Product diversification is limited, so the design needs improvement
Management	Traditional management, management needs to be improved in a professional manner. Management is still family so not well ordered. a. Human resources management, there has been no regeneration in pattern making all activities ranging from the manufacture of batik motif or pattern, production, marketing to finance only held by one person. b. Lack of production management competence / expertise specifically in the production process of making patterns, drawing, batik until finishing & dyeing process c. Financial Management, the lack of bookkeeping, though modest, in the business so it will thrive well d. Marketing management, there is no good marketing strategy so that the marketing of relatively constant month to month
Equipment management	<ul style="list-style-type: none"> <li>• computer</li> <li>• information technology and communication media</li> </ul>
Marketing	Marketing is still simple that needs to be done to develop the market promotion. P roses in marketing directed at marketing with multimedia
HR	Skill is still limited, need to increase the competence (knowledge and skills)
Facilities	Facilities are limited, in order to support the necessary increase in productivity There needs to be setup in the production process so as to make production more simple and run smoothly. The main facility is required a. pan for nglorog, b. sewage treatment plant c. Spatial planning so that production could flow more smoothly d. Show room for production. e. Computer
Financial	Limited capital, need assistance in the form of soft loans. No bookkeeping

### 5. Methods of Implementation

Broadly speaking, the pattern used in the implementation of program activities include: discussion, work workshop / studio, plant operations, training and mentoring (group and individual). The steps in the implementation of science and technology are presented in Table 3.

**Table 3.**  
**Patterns and methods of program implementation**

Implementation science and technology	:	Stages of implementation
Innovation dye machine (feeder), includes the addition of rotary pipe outside the tube as the color, the addition of	:	<ul style="list-style-type: none"> <li>• Team discussions with SMEs about the advantages and disadvantages of existing feeder</li> <li>• The team designed a feeder image, then discussed again</li> </ul>

two rollers, the addition of the motor		<ul style="list-style-type: none"> <li>Revised drawings feeder design</li> <li>Making the feeder in the garage UNS</li> <li>Excess redesigning feeder: fabric perfectly open automatically, as the fabric does not rub against the silent, steady pace, fast, and lightweight, flat colors, fast drying.</li> </ul>
Development of printed batik design	:	<ul style="list-style-type: none"> <li>Discussions with the team about the SME market interest motif (consumer) and not yet available in SMEs</li> <li>Draft design drawings motif (A4 paper)</li> <li>The discussion draft drawing batik design with SMEs</li> <li>Improvements draft design into design work ready (1:1 on tracing paper)</li> <li>The design work ready diapdruk on screen</li> <li>Screen results apdruk tested and refined</li> </ul>
	:	<ul style="list-style-type: none"> <li>Team discussions with SMEs on the concept that the market demands motif (consumer) and not yet available in SMEs, with labar cultural destinations (eg wayang beber patterned design for the Indian market, Thailand, the motive for the Japanese cherry blossoms)</li> <li>The draft master batik design drawings (A4 paper)</li> <li>The discussion draft drawing batik design with SMEs</li> <li>Improvements draft design into design work ready (1:1 on tracing paper)</li> <li>Design master design compiled with other masters and with other colors, produced many new designs ready for work</li> </ul>
Innovation dough composition of colors	:	<ul style="list-style-type: none"> <li>Contok collection of color intensity, and then offered to SMEs, and SME team determines these colors (list colors Table 7 and Table 8)</li> <li>The team made the dough dikendaki bleak color batik SMEs based on the theory of color batik (naphthol, natural dyes). Adjuvants to induce and reinforce batik natural color is lime, citrus, vinegar, saltpetre, alum, rock sugar, palm sugar, prusi, molasses, lime water, tape (cassava / sticky rice), banana and guava</li> </ul>
Implementations staining techniques	:	<ul style="list-style-type: none"> <li>Staining with the dye techniques with less machine feeder</li> <li>One machine feeder for one color, so the color matches the color that you want, no contamination with other colors.</li> <li>Staining with a dab technique, with the brush tool in small areas.</li> </ul>
Innovations print table rails models dead (static).	:	<ul style="list-style-type: none"> <li>Team discussions with SMEs on the print table design, size, and material.</li> <li>Printing table 2 x 10 m (4 pieces of cloth), or print a table size that is longer will be more effective production process.</li> </ul>
Plant layout design	:	<ul style="list-style-type: none"> <li>Team discussions with SMEs about the condition of the existing production flow (over / under)</li> <li>Teams and SMEs plan to discuss the plant layout, plant layout elected realized.</li> </ul>
Management Development	:	<ul style="list-style-type: none"> <li>Team discussions with SMEs about the condition of the existing production management (over / under)</li> </ul>



		<ul style="list-style-type: none"> <li>• The team conducted an analysis of SME management needs, including the needs of</li> <li>• Teams prepare bookkeeping materials: books dafatr goods inventory, beginning balance book, cash book transactions, the purchase of books, book sales, book inventory, accounts books, book debts, wages bankbuku books, book income, book production costs, book orders, book balance the end of the book balance and the comparison</li> </ul>
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### Training

For the development of managerial systems and to improve the skills of employees / batik artisans have done a wide variety of training, including:

1. Managerial training, which includes Human Resource Management, Marketing Management, Production Management, and Financial Management is simple, especially on the recording.
2. Training on the development of batik design. In the training steps are performed:
  - a. Tim discussions with SMEs to determine the design concepts are much in demand by the market / consumer, of course taking into account that for the implementation of natural colors will slightly increase the cost of production.
  - b. Team makes draft design motifs proposed on A4 paper
  - c. Figure draft design motifs are then discussed with the owners of SMEs, then if necessary, make revisions.
  - d. Draft revised design was then made into a design ready to work with 1:1 scale on tracing paper, which later became the master design.
  - e. SMEs then develop this master design by making modifications and improvements that can enrich existing motif.
3. Training for colouring techniques (Natural Color Techniques)
 

Namely the use of environmentally friendly natural dyes (instead of chemical dye), the material is derived from leaves, fruits, roots, and so on.

**Table 4.**  
**Material natural color and color batik**

No..	Materials dyes	The resulting color
1.	Indigo leaves (indegofera)	Blue
2.	Higher bark Soga	Red
3.	Soga bark tegeran	Yellow
4.	Soga bark jambal	Red-brown
5.	Java soga bark (cup), tekik	Red
6.	The roots of noni (Morinda ciyrifelia)	Red-brown
7.	Intersection buffoonery	White milk
8.	Turmeric	Orange
9.	Tea	Brown + black
10.	Gambir / nut	Red-brown-black
11.	Bark and leaves of mango / mempelam	Brown
12.	Leaves whisker shy daughter	Brown
13.	Banana flower	Red-black
14.	Peanut leaf	Brown

### 4. Training for export trading

We also provide training to improve technical skills in terms of the export trade

### III. Conclusions

#### Result

##### I. Implementation Program

###### a. Preparation

The preparation stage includes the step of preliminary visits to SMEs with requirements analysis and preparation of training materials, facilities required, as well as a competent instructor, has been done on time according to the proposed schedule and the achievement of the objectives meet the criteria as planned.

###### b. Implementation.

Broadly speaking, the pattern used in the implementation of this IbPU include: discussion, work workshop / studio, plant operations, training and mentoring (group and individual). The steps performed are:

1. Discussion Team with SMEs about the condition of the machine dyes (feeder) existing as well as potential improvement / development or the need for the addition of a new engine.
2. Development of design / motif new, more attractive and marketable.
3. Innovation staining (with natural dyes) are more attractive to consumers (especially overseas consumers), and the printing table innovation (static rail models) to develop the production process.
4. Development and Management Training, which includes Human Resource Management, Marketing Management, Production Management and Financial Management (Recording). Then all these activities followed by assistance in the implementation process.

##### II. Institutional Benefits

Efforts application of science and technology (science and technology) developed have contributed to the increase in the participation of the University of March in order to improve the quality of life of rural communities, in particular the presence of SMEs around the partners ( Masaran Sragen district) in the fields of education, economics, social and culture.

##### III. Social Benefits

Implementation of activities program held in the batik industry is giving a contribution to the development and improvement of human resources for the citizens in District Masaran Sragen, so as to improve their motivation and skills to become self-employed or independent business managers become more professional workers.

#### Suggestion

To further enhance the effectiveness of the implementation / implementation of science and technology program for Products Featured in future, it is advisable to:

1. Using the approach of the partners with a better method, as well as sufficient socialization that more SME partners have no motivation to evolve and improve its performance.
2. Consistently various fields of design innovation and implementation of training methods should be developed according to the needs of participants and the grasp of the trainees.

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# **Beyond Regular Employment Contexts: The Transferability of Pay, Satisfaction and Performance Linkages to Internships**

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## **Abstract**

Internship participation has undergone rapid expansion over the last three decades, to the point where today many interns and host organisations regard internships as the preferred pathway into entry-level professional positions. However, organisational research has largely neglected the investigation of internships as an employment context, thus a majority of established predictive relationships in the workplace remain untested within the context of internships, including, fundamental workplace causal relationships between Pay, Performance and Satisfaction. This study collected data at three time intervals from 303 intern-supervisor matched pairs (n=606), to establish the transferability of these relationships to the unique employment setting of internships. Findings indicated that although payment level influenced intern satisfaction it did not play a significant role in influencing interns' in-role performance, whereas internship satisfaction did positively impact intern performance.

**Keywords:** Internships, Job Satisfaction, Pay Level, In-Role Performance

## Impact of Project Leader's Style on the Success of The Projects

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### Abstract

This paper discusses the various leadership styles of a successful project manager which eventually lead to the success of a project. It is important for a project manager to understand and adopt the skills required to cope up with the contemporary challenges of any project. A project manager must be able to handle assigned project effectively and efficiently by setting policies, procedures, matrices, models and adjusting the allocated budget. He must be ready to assess the factors effecting success of the project and also mitigate the risks being faced. In this paper we have evaluated the influence of all those factors that actually help a project manager to handle, manage, direct and lead a project with adequate knowledge and skills in hand. We have established a linkage of project manager's characteristics to project success for three different projects in three leading industries through a web-based survey which has revealed that only specific leadership styles /traits can lead to better performance, quality and success of projects. Some basic factors like project complexity, novelty, type of project, the age, gender and nationality of the project manager play a vital role in success of a project.

**Keywords:** Leadership Style, Project Success, Project Management, Project Manager

# Positive Influences of ‘Buddhism’ on Successful Female Entrepreneurs

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## Abstract

It is the purpose of this paper to investigate how successful female entrepreneurs have adopted, interpreted and applied the Buddhist teachings to their business, whether during the start ups and/or the ongoing business operation. Because Buddhism is a vast literature, this paper only focuses on the fundamental concepts of Buddhism which are the five precepts, namely, no lying, no stealing, no extra marital affairs, no toxics or alcohol consumption and no killing. This paper asked the five interviewees on how they viewed themselves as the practicing Buddhists and how Buddhism influence their choices of their businesses, how they do their pricing, market their products and the results found that Buddhism shape the female entrepreneurs from day to day business operation to an ultimate goal of their businesses.

The author has particularly chosen women as a sub group of the general entrepreneurs because it is vital nowadays to acknowledge the important roles of women and the growing participation of women in entrepreneurship. Women in general are believed to have stronger association with any religion. This paper intends to understand if a religion such as the Buddhism has any impact on the success of female entrepreneurship.

This research suggests that if the Buddhism can help female entrepreneurs, the policy makers could design their policies to help the economies tap the untapped resources through women 2 entrepreneurs. This can be used as a platform to study the success stories of other successful female entrepreneurs in other countries too.

**Keywords:** Buddhism and Gender Issues in Entrepreneurship

## I. Introduction

Business ownership is a significant opportunity for women in the business world. Entrepreneurship as a research field of study is receiving growing attention from researchers worldwide especially since women are considering ‘being an entrepreneur’ as a practical option for them given their personal and family commitment or even for some who have encountered ‘glass ceiling’ in the organisations. However, the existing literature is still fairly limited to those women’s participation in their family businesses, the majority of studies assume that women are a homogeneous group. Thailand being a Buddhist country, the literature on Buddhist entrepreneurship let alone the female ones have hardly been discussed. This study investigated what the Buddhist teachings have told about the roles of women in businesses and also apply the teachings which the author believes could be implications and helpful for the female entrepreneurs.

The central focus of this research paper is on successful women entrepreneurs in Thailand. It will attempt

to answer the following questions:

1. How successful female entrepreneurs view themselves as practicing Buddhist and to what degree?
2. Does Buddhism help in facilitating the success of successful female entrepreneurs in Thailand? If yes, how and to what extent are the influences of Buddhism on their businesses? For example, do their marketing initiatives (such as the marketing mix) have Buddhist influence?

There is still much research to be done on female entrepreneurship, as it is significant in economic growth as they have untapped resources for the local economy including job creation and diversified sets of knowledge and talents. However, very little is known about women entrepreneurs especially those with success stories to share. The fact that women in business have just started to receive attention is a worldwide phenomenon. Only 6% of all academic research deal with women. And often, previously, traditional assumptions underlying entrepreneurship were often gender blind as they were based on the experience of men.

In the developing countries like Thailand, this research study found that there is an element that the religion helps the female entrepreneurs to be successful. It was, therefore, important to examine whether there are any existing teachings or theories in Buddhism which talks about the roles of women in businesses and help facilitate their success stories.

In this research study, the author explored, investigated and identified the main fundamental Buddhist teachings, the five precepts, which help female entrepreneurs in Thailand. Then, interviews were conducted with 5 successful female entrepreneurs over a period of two months. Only successful Thai women entrepreneurs were interviewed and they were selected based on self-defined success. The first part of the data collected was analysed to understand the general personal characteristics of these women and their businesses background.

It is important to understand what role the Buddhist religion plays to assist the female group of entrepreneurs through understanding of what is available already and what is hindering the progress of women starting up their businesses.

The study of female entrepreneurship has recently become an area of interest and as such there has been a remarkable increase in the number of studies of women entrepreneurs (Anna, Chandler, Jansen, and Mero, 2000; Becker-Blease and Sohl, 2007). It has been widely recognized that women's entrepreneurship is an essential untapped cause of economic development due to interrelations of cultural and economic coercion that hinder women's choices of career development and labor marketability (Basil, 1972; McElwee and Al-Riyami, 2003; OECD, 2004). Women's participation in the labor market is often challenged by implicit and unrecorded social traditions in a patriarchal and male dominant society (McElwee and Al-Riyami, 2003). While there are many women facing difficulties or prejudices in their workplaces (Bhavnani and Coyle, 2000) and family business, there are still some women who have overcome such challenges and became successful, through their dedication, confidence and family support. According to Taormina and Lao (2007), business environment plays significant influence on entrepreneurial motivation and operation.

Previous entrepreneurship research has developed along two major spheres including the personal characteristics of entrepreneurs and the influence of socio-economic, culture and political contextual factors (Mazzarol, Volery, Doss and Thein, 1999). However, this research is unique as it deals with the relationship between Buddhist teachings; the roles of women and success entrepreneurship. Such a significant issue has not been explored before although it has an important impact on successful female entrepreneurship. Culture, society and religion shape entrepreneurs (Dana, 2010).

Sustainable growth and development are created through entrepreneurs' innovation (Ramadani, Gerguri, Rexhepi, Abduli, 2013). Since globalization began in the 1980s, more women are positioned in the entrepreneurship representation (Lumpugnani and Holton, 1991). Women play a significant role in entrepreneurial activities. In this paper, success in terms of career as an entrepreneur is defined based on the subjective and objective elements of achievement and progress of an individual through an organization or occupation (White, 2000). Many people place great emphasis on objective aspects such as quantitative measures including profits, sales, promotions, and so on. However, this research study emphasises on the personal measures of a woman's success, which is being able to contribute her personal values to her businesses. Also, a woman's success is often self-defined as one who believes she can achieve intrinsic values such as flexibility, balance between work and family responsibilities and independence, and in which financial success would follow (Still and Timms, 2000). It is also perceived that increased confidence reduces the risk of entrepreneurial activity (Brindley, 2005).

Successful Buddhist female entrepreneurs in this research are the women located in Thailand and whose aspirations to earn their living through innovation in entrepreneurial activities, usually owning small businesses. Moreover, these independent women consider themselves as being successful as their businesses reap reasonable profits and they are satisfied with the rewards.

## II. Theoretical Framework

*The roles of Buddhism on Entrepreneurship:* Sachayansrisakul (2008) has indicated in her research study that personal attributes; including three self's which are Self esteem, self reliance and self respect, play an important role in the successful entrepreneurship especially among the successful female entrepreneurs given a favourable environment. This study can be an extension of the previous research and also provides a further platform to future studies of how to become successful entrepreneurs especially for the women. One important key that shape personal values or attributes is religion. According to Dana (1995), religions which generate social values can influence entrepreneurship. It can view entrepreneurs as achievers or even failures. For instance, achievers are those who are successful, earn excess money and contribute to the communities. On the other hand, failures are those who choose entrepreneurship as a way to make money based on their greed and selfishness.

As cited in Dana (2009):

Williams & Zinkin (2007) mentioned in their study that those entrepreneurs with their religious backgrounds tend to be more socially responsible than those who are not.

Guizo, Sapienza and Zingales (2003) discovered in their studies that Buddhists entrepreneurs were considered less lazy and more enthusiastic as compared to other entrepreneurs in other religions.

Zingales (2006) also suggested that Buddhism complements and promotes best attitude towards capitalism.

Buddhism has no objection against the entrepreneurship and in fact Lord Buddha encourages his followers since the Buddhist era to earn money enough for the entrepreneurs themselves, their families and extra funding and/resources to be shared with the communities and the less unfortunate people in their communities regardless of their demographic or socio economic backgrounds. According to the Vulnerable Dr. Somchai Dhannawutto (2012), Buddhism highly values honesty in any business operation and the religion does not approve of the following trading activities:



1. Trading of weapons
2. Trading of humans or in ancient times, no trading of slaveries
3. Trading of poisons
4. Trading of illicit drugs
5. Trading of farming animals for killing for instance raising pigs to sell it as pork

In Thailand, entrepreneurial activities are encouraged through Chinese migrants who have brought their entrepreneurial spirits with them since they migrated to Thailand over four generations ago. As such, Thailand has more entrepreneurs ranging from a sole trader to small to medium businesses.

*Successful Female Entrepreneurship:* Women are required to incorporate business leadership roles with the diverse dimensions of their lives, including balancing work and home commitment (Blisson and Rana, 2001). In order to avoid unfair treatment and glass ceilings, many women choose to start their own entrepreneurial activities (Still, 2005). Entrepreneurship is also a practical direction to achieve economic improvement for Thai women (Robb, 2002).

There are two levels of female involvement in businesses (Dhaliwal, 2000a; Chavan and Agrawal, 2004). Firstly, women are considered as co-owners or participants in their family businesses where there is a male dominant player who is the main decision maker. There have been many research studies with primary focus on this level of women involvement in other countries.

Another level is where women own the businesses as a whole or in part. They are usually independent entrepreneurs who have complete control over business operations and decision making (Dhaliwal, 2000a, b; Chavan and Agrawal, 2004). Increasingly, such successful women have more valuable choices and resources to utilize (Mattis, 2000). They are usually middle-class women who have a diversified set of skills, different expectations, resources and are well integrated into their host country whilst maintaining the positive attributes of their home culture (Levent, Masurel and Nijkamp, 2003).

All in all, this research study is one of the pioneer in female entrepreneurship especially in terms of application of religion especially Buddhism. The roles of women, despite being in modern societies revolve around the balance between domestic and business responsibilities (Adler, 1993). Working women face the challenge of participating in two mismatched activities implying that their business involvement does not reduce their traditional roles as wives and mothers (Omar and Davidson, 2001). Such women are sometimes referred to as ‘superwomen’ as they combine their roles of family caring and conducting business (Omar and Davidson, 2001).

Nevertheless, increasing education levels and dynamic entrepreneurialism are now determining the emerging improved status for women (Adler, 1993). Female entrepreneurs appear to bring together not only business opportunities but also personal characteristics to enhance their businesses performance. The personal characteristics include their own psychological factors such as entrepreneurial aspirations, risk-taking and affirmative decision making styles which lead to better operated businesses.

*Buddhism and roles of women:* Buddhism has always viewed women as important if not a superior sex. According to a personal interview between the author and the Abbott of Wat Thai Kushinagar Maharaj Buddhist Temple (India), Monk Veerayuth said ‘*according to Buddha, women are precious as they provide the wombs to men and women alike. Even the Lord Buddha was born from his mother’s womb. As such, women are held*

*highly in Buddhism*'. According to the main Buddhist book known as "Tripitaka" that includes all the teachings of Buddhism, have mentioned several names of the significant women who have supported Lord Buddha through to his enlightenment during the Buddha's era. For instance, Mrs. Visaka and Mrs. Suchada who were devotees to the Buddhism. During Buddhist era, it was ideal for all men and women to achieve enlightenment, these two ladies were just one of many women who were enlightened in their young days. In various Asian countries like Taiwan, ladies are mainly religious leading nuns.

Nowadays, things are different, human beings's successes are judged by their wealth. Nevertheless, different people can define success differently. According to this research study, success is defined by the capacity of adding values to the entrepreneurs' selves, families and communities through their business ventures.

*Fundamentals of Buddhism*: Buddhist teachings for lay Buddhists (excluding the monks and the nuns) are established on the 5 precepts;

1. Abstain from killing
2. Abstain from lying
3. Abstain from stealing and/or abstain from taking something that is not yours.
4. Abstain from extra marital affairs and it also covers any overindulgence in any sensual pleasure such as greediness as well as misconduct of a sexual nature.
5. Abstain from consuming alcohol and/or other toxicants

The above five precepts are considered beneficial gifts not only to one's self but also to others. They are the guide principles every lay Buddhist should follow at all times.

According to Schumacher's book titled 'Small is Beautiful' (1973) as cited in the Buddhist Studies (2015)

*"While the materialist is mainly interested in goods, the Buddhist is mainly interested in liberation. But Buddhism is the Middle Way and therefore in no way antagonistic to physical well being. The keynote of Buddhist economics is simplicity and non-violence. From an economist's point of view, the marvel of the Buddhist way of life is the utter rationality of its pattern - amazingly small means leading to extraordinarily satisfying results."*

### **III. Methodological Consideration**

This research is designed as a descriptive study using in-depth interviews with 5 successful female entrepreneurs over a period of two months in Thailand. Thai women were selected to be the population for this research because the researcher could be termed an insider of this particular grouping, this facilitated access to these communities and it also enhances the originality of the research methodology.

Although there are two levels of involvement among women in small businesses, this research focuses only on independent Thai women who co-own or own their businesses with a fair amount of decision making power and authority. This is because this group of women is not only growing in number but also play significant roles in the economy.

The sample of successful female Buddhist entrepreneurs was established through the author's personal business networks in Thailand. Open-ended questions in the semi-structured interviews were used in the process of interviews.

The interviews process started with general questions about the industries the respondents are operating their businesses in. The respondents come from various industries such as in health, retail and media industries. The interviewees were asked on the levels of their own Buddhist practices including 1) being Buddhists by names; 2) Medium Buddhist believers and practitioners. They are defined as regular temples visitors, do the basic religious rituals like merit making and food offerings to the monks, regularly pray; 3) Extensive Buddhist practitioners. They are the ones who meditate, practice merit making, and follow all the teachings by heart. Four of five respondents categorised themselves as group 2 as the medium Buddhists practitioners; whereas the other one considers herself as a hardcore Buddhist in the last category.

Interview questions also covered the following issues in the discussion:

- 1) Whether the respondents considered themselves as successful and the reasons behind their answers.
- 2) Whether they apply any aspect of the Buddhist teachings in their start up or ongoing business operations.
- 3) Any advice they could share for the new female entrepreneurs.

#### IV. Discussion of Findings

From the questions above, the answers are illustrated as follow:

**1) Whether the respondents considered themselves as successful and the reasons behind their answers.**

All of them agreed that they were not overly successful in terms of financial rewards but they were happy to do what they enjoyed especially their business choices are something to help other people. For instance, one business owner (the first business owner no. 1) owns a retail shop that sells products to be used for Buddhist religious ceremonies like the robes for the monks, the things that are used by the monks. These amenities and clothing are usually offered as part of the Buddhist ritual merit making. This business owner had a very good intention at a start to sell quality products to her customers and so that the monks receive high-grade offerings and also be the messenger of Buddhist teachings through her trades. (In Buddhism, monks have to be offered food and necessities for their consumption by the common people).

**2) Whether they apply any aspect of the Buddhist teachings in their start up or ongoing business operations.**

Similarly, all five respondents said they chose their business because they wanted to do something good and something worthwhile for others. They believe in Karma (what goes around, comes around that is if you do good, you receive good and vice versa if you do bad things to other people). As such, they want to earn their living with good intention. Another retail business owner (no. 2) said:

*‘Buddhist teaching teaches me to have a good start in business and hence, a good business foundation. I always use good raw materials in my retailing business, I think good and I am honest. Even with my employees in my factory, I treat them well and try my best not to take advantages of anyone. I have compassion for my staff members, suppliers, and customers. And when my customers like my products, they tell others. The business is thereby successful because of word of mouth. Consequently, I do not need to rely on other marketing strategies’.* She further believed that *‘her good merits are behind her success.* Once she receives her profits from her business, she donates some parts of her income to the less fortunate communities as well. This happens in her business cycle and finally achieves sustainable

business.

The third interviewee (health shop owner) said she always been interested in health and therefore would like to promote good health among the communities. As such, she decided to start a shop that sells health related products and gadgets like organic produces and detox products. She likes to pray and meditates. She does not believe in hurting other people and/or animals. She strongly believes in honesty and strictly follows the five precepts. She said she is happy with her business because it helps promotes good health and profit is not a priority.

The fourth interviewee is an owner of a media company. It has been run successfully over 10 years. The owner herself is on a wheelchair but she has created this sustainable business based on honesty. She said her profit is not overly high but it is sustainable and it makes her independent despite being on a wheelchair. She said her business is well known and she earns enough money to keep herself satisfied. She said she was once a tricky business person but after being practising Buddhism like praying and merit making, she attempts to minimise all the capitalist tricks when doing her businesses. She finds herself successful in being honest with all her stakeholders including her business partners and her employees.

Finally, the last interviewee also owns a retail business. She believes in moderation especially in terms of profit. She said she ‘moderately wants profit – not too much, not too little to exploit herself or others’. Again, she considers herself honest and truthful when selling her products to her clients. She sells good quality products at reasonable prices which reflects the good quality of her products. She does not believe in cheating her stakeholders. She still wants her business to grow further and earns more income but based on happiness.

### **3) Any advice they could share for the new female entrepreneurs.**

The last question dealt with the suggestion the five respondents could share to other female entrepreneurs. The health shop owner suggests that businesses should start with good intention, the owner should think about good things and the business should be transparent with the aims of helping others. This kind of business should succeed. One of the retail business owner also said businesses could grow from good connection and through your circle of good friends and business associates, so ‘*you know you are not alone*’.

#### *Application of the five precepts to female entrepreneurship:*

1. Abstain from killing: this is applicable to hurting one’s self and others. This also includes being compassionate to all the living beings. In terms of businesses, this would have an impact on business choices. For example, Buddhist female entrepreneurs would not opt for selling poultry, meats, and/or weapons used for killing.
2. Abstain from lying: this could also apply to being dishonest. When it comes to pricing, the women entrepreneurs would not unfairly set prices. So their pricing would be reflecting the true value of their products/services. They refrain from false advertisements.
3. Abstain from stealing and/or abstain from taking something which is not yours. This again is reflected in the female entrepreneurs’ pricing strategy and also competition strategies. They do not steal their competitors’ clients. Indeed, they work hard to serve their own customers and leave them to spread their words of mouth to promote the businesses.

4. Abstain from extra marital affairs: this is a personal matter within the family, but one thing is that these successful female entrepreneurs maintain good household duties as mothers, wives, and/or daughters.
5. Abstain from consuming alcohol and/or other toxicants: This is personal choice but yet, it is basic business operation etiquette practice. However, this precept ensures that the interviewees run businesses professionally and not under any toxication when make important decisions in the businesses.

## V. Conclusion

To sum up, we found out that Buddhism is well adopted and applied in the businesses owned by five successful female entrepreneurs. Women, Buddhism and entrepreneurship could be the drive to better society as a whole as well as improved business performances. Ideally, the sustainable businesses are achieved through the influences of Buddhist teachings. According to Haddad & Findly (1985, pp. xi ), they said:

*‘Women from a number of religious traditions have been able to bring about change and the manner in which religions have either facilitated or inhibited women's participation in the process of change’.*

The findings in this study are significant both in terms of theoretical and practical standpoints as they contribute to the existing literature of female entrepreneurship; especially it is the pioneer study of such themes as Buddhism and female entrepreneurs. Specifically, entrepreneurship is considered as one of the important economic growth mechanisms that creates wealth and generates growth through employment, invention and diversity. This research adds to academic knowledge in female entrepreneurship, especially in terms of stronger literature and information that future research can be built upon.

There is scope to further expand this research by using Quantitative research methodology to generalize the results to other women elsewhere in broader industries as well. Also, the choice of sample in this study includes ‘successful’ women entrepreneurs that have been defined based on self-definition. As such, more studies could be developed to study the success of women entrepreneurs based on monetary and financial terms considering the growth, profit and loss of their businesses.

Further research could also involve comparisons among different religions to assist women entrepreneurs in different countries. Research could also study the impact of role models, whether such successful women entrepreneurs have had any role models and whether or not these role models generally come from a similar ethnic community.

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## Readiness of Employees for Organizational Change

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### Abstract

The purpose of this study was to examine the effect of attitude and leadership on employee readiness to change. Here, Change program is related to the implementation of remuneration in public sector. This research was conducted to lecturer and staff at Universitas Sebelas Maret. 143 sample size were taken with proportional stratified random sampling. Multiple regression analysis was used to test the hypotheses. The results indicate that employee attitudes towards change and leadership have a significant effect on the readiness of employees to cope with change program.

**Keywords:** readiness to change, leadership, attitude toward change, remuneration

### I. Introduction

Recently, organizations are competing each other to build breakthrough in change management (Piderit 2000, Helfrich, Li et al. 2009). Various change receipts are performed to achieve optimum result. Unfortunately, only a few of them have announced the successful of their program, many of them have declared failure, and a few of them have unfolded to decide organizational routes. piderit (2000) strengthen kottler's view by identifying that 70% of organization has been failed in their change program. Nevertheless, organizations have been notice the failure risk to perform change program, but they are understand that they have no choice to

sustain by performing change program, because change is the certainty in organization (Scott and Wolfe 2003)

Brutal facts regarding the failure of change implementation in public sector has been acknowledged by academicians and practitioners. Public sector is often criticized due to inefficiencies in the organizational structure, competence, and motivation (Kavaliauskaite and Jucevičius 2010). Conflict of interest is the common reason when implementing changes in the public sector (Cunningham, Woodward et al. 2002). Both researchers revealed that in public sector, change management is about negotiation and compromise among stakeholder. The inability to accommodate ones' interest is more likely causes of failure in public sector. Thus, public sector is often considered as unresponsive to change (Clegg and Walsh 2004).

Public sector reform is most likely seen as national level, but it rarely valued as organizational standpoint. However, a reform is unending process. This effort is usually spend a lot of anxiety, tension, and energy in the process, both for intuitions, employers, and employees. Management strives to create a positive response in change program, because in most cases, organizations' member gives chaotic response in facing change program. Tangible assistance in the change process has been proven to dampen volatility in organization, because previously, the public sector uses traditional pragmatic way in facing the change (Judge and Piccolo 2004). Currently, the public sectors improve in response to reform the bureaucracy.

In Indonesia, the bureaucratic reform process started to be implemented in 2010 through the issuance of Presidential Regulation No. 81 Year 2010 regarding the Reforms 2010-2025. This regulation is followed-up by the bureaucratic reform efforts made by the issuance of PAN and RB Ministerial Decree No. 20 of 2010 on Reforms Roadmap 2010-2014. Bureaucratic reform efforts were made to achieve a good organizational governance. A well-managed process is needed in order to respond the environmental changes, therefore, the implementation of remuneration in Ministry of Finance, runs effectively and efficiently (Smith 2005)

The important thing to do is to disseminate or communicate the need for change. The changes will have consequences that parties related to the change will invest their time and energy to act and behave differently than before. Therefore, employees must first understand the reasons why they made the change. If the employee believes that the changes did not bring any benefit, there will be resistance to change. This will affect the attitudes and behavior of employees ((Shah and Irani 2010, Faghihi and Allameh 2012)), as well as the stress and commitments (Vakola and Nikolaou 2005). Finally, effective communication regarding the need for change is a necessary prior step in change process.

Researches on public sector internal issues have not worked optimally. Preparing the employees and investigating the role of leadership style are important factors in public sector. However, those factors are rarely investigated. Employee readiness is important factor to reduce resistance to change (Armenakis, Harris et al. 1993, Cunningham, Woodward et al. 2002). This research focuses on the actor-centric, namely, readiness to change in facing changes program. Readiness to change is a concept for the implicit change to illustrate the dynamics power involved in the change program(Clegg and Walsh 2004), as well as conflicts of interest of public sector reform program.

Leaders agreed to be a key driver in organizational change (Kuipers, Higgs et al. 2014). A leader is someone who influences his staff to be willing to run errands exceeds the minimum requirements specified (McNabb and Sepic 1995). In this research, we investigate two variables that allegedly have an important role in

the attitude of change management, namely readiness to change of employee and leadership style. This study specifically tries to identify the readiness of remuneration. Furthermore, this research tries to give a general overview of an ideal situation so that remuneration can be run effectively and efficiently. When the result of this research has come out, it can be used as a basic policy of creating qualified human resources.

## **II. Hypothesis Development**

### **1. Attitude towards Change and Readiness to Change**

Readiness to change is considered as a first step to realize the success of a change. Readiness to change is the process of the first stage of cognition to push or reject a change (Armenakis, Harris et al. 1993, Armenakis and Harris 2009, Neves 2009). Readiness is reflected on attitudes toward organizational change in the organization's members. Management can put the level of success of change program based on their judgment on member's readiness. In addition, readiness to change provides an important role for determining whether an individual is willing to endorse or reject the change (Holt, Armenakis et al. 2007, Holt, Armenakis et al. 2007, Helfrich, Li et al. 2009)

Optimism for change can be traced from the readiness of the organization's members. Readiness to change implies that members of the organization have beliefs, attitudes, and intentions to change (Armenakis et al., 1993). Attitude toward change is a reaction to changes someone affective, cognition, and behavioral tendencies of the change (DiClemente, Schlundt et al. 2004). Affective reaction is related to the change satisfaction, while response is cognitive opinions on the advantages, disadvantages, or the significance of change, and finally, behavioral responses. Behavioral response is someone's action who has done or may be done in the future to support or reject the change (Fugate 2012). Based on consistency theory, attitude is a rational process that ultimately showed consistency in action (Faghihi and Allameh 2012).

Someone has a tendency to respond the information cognitively. An evaluation of such information would be an attitude to face problems. If a person obtains positive information, enough socialization, and understand to urge of changes program, employee will be more prepared for change. Without sufficient understanding, it is difficult to make a person ready to change. In many organizations, socialization has been done many times; some were performed a few times, but failure to convey the urgency of a policy program the readiness has appeared. Based on the explanation above, we tried to formulate the first hypothesis.

### **2. Transformational leadership and Readiness to Change**

Leadership style influences employee's reactions to changes (Yukl and Van Fleet 1992, Yukl 2002). The essence of leadership is the ability to influence followers. Leaders have an important role in controlling the course of change, as the result, member can express their support or oppose the changes (Shah and Irani 2010). A leader is considered as guiding conceptor of the changes that occur in the organization. Employee's perception on seriousness and commitment toward change are highly dependable on their leader. Employees who committed to their leader on changes impact can reduce the complexity of change.

Competitive environment makes everything harder to be predicted. In some cases, leaders use employee's suggestions and comments as a source of information (Faghihi and Allameh 2012). Leaders who are willingly to

change will provide an opportunity for employees to contribute (Bass 1991, Bass and Avolio 1993, Cunningham, Woodward et al. 2002).

Transformational leadership style has considered as a factor that can be relied upon applying an organizational change program (Yukl and Van Fleet 1992, Yukl 2002). The process of organizational change sometimes creates uncertain and challenging situation before considered as successful venture. By the changes of time and the appearances of difficulty, then rejection of change begins (Vakola and Nikolaou 2005). The situation gets worse when the change seems unclear. Through transformational leadership style, cynicism and resistance to change can be reduced.

Transformational leadership is defined as leadership style that stimulates followers to change employee's beliefs, values, capabilities, and motives to achieve organizational advantage (Bass and Avolio 1993). The appropriate leadership style must be applied to organization that developed the change program. Through this transformational leadership style, employees are expected to understand the reason for the establishment of change program. Transformational leadership style is important capital on persuasive efforts to convince the importance of change. This persuasive effort improved the readiness to change. The importance of preparing readiness to change through transformational leadership style is becoming one of determinant factor of change program.

Based on consistency theory, attitude is a rational process that ultimately showed consistency in action (Faghihi & Allameh, 2012). If employees perceive higher transformational leadership, the positive attitude toward change is increasing. Therefore, employees believe that if their leader is a transformational leader, employee will tend to commit to change program. If there is a problem in the middle of the change program, the leader will be ready to against those who resist toward change program. Transformative leaders make the employees have a strong belief that eventually becomes a positive attitude on change program. Based on the explanation, this research is formulated a second hypothesis as follows:

### **3. Readiness to change**

Transformational leadership considered capable of co-opted the strategic decision to change and able to convince employees to change their mind to get ready for the change. Change is the transformation of an organization from one state turns into another state, both involving a change of broad and narrow space. Attempts to run the changes may obtain constraints and resistance if the employee is not prepared for change. The situation became increasingly difficult if management does not take appropriate measures to face this resistance (Fugate 2012)The negative impact of nervousness, restlessness, and anxiety can be reduced through preparing employees to face the change. Readiness to change is defined as trust, belief, and behavior receives the needs and capabilities of the organization (Schwartz, 1994). Transformational leadership that is aligned with the face of changing attitudes will improve the readiness of employees deal with change, therefore, we formulate hypotheses 3:

**Hypothesis 1: attitude toward change has a positive effect on readiness to change**

**Hypothesis 2: transformative leadership has positive effect on readiness to change**

**Hypothesis 3: transformational leadership and attitude toward changes have a positive effect on**

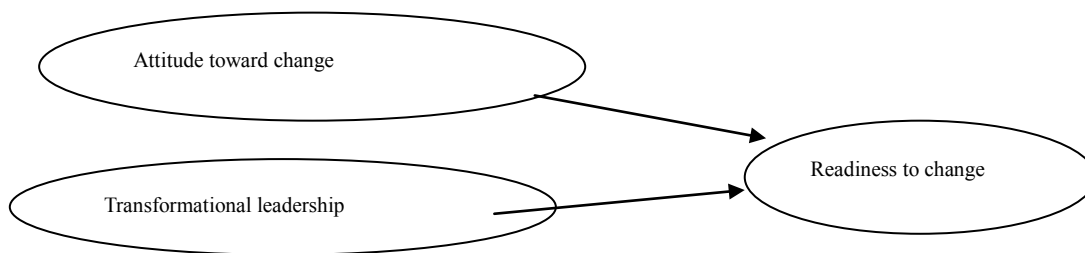
**the readiness to change**

**III. Research Methods**

**1. Research Design**

Research design includes the destination, the unit of analysis, and the data types. The purpose of this study was to test the hypothesis. The unit of analysis is the individual-level research, and using cross-sectional data types. This study is a continuation of a study conducted by Faghihi and Allameh (2012) in public sector. Here is a model research

Figure 1



**2. Population and Sample**

The population was all employees consisting of educators in Universitas Sebelas Maret. Universitas Sebelas Maret is public sector organization that has been influenced with the bureaucracy reform. Remuneration is the change program. Self-administrated survey is conducted to reduce bias in the data collection. Total number of respondents are 143. Male are majority responden with 66.4% (95 responden), while female are consists of 33.6% (48 respondent). Average tenure is 20.09, while average age is 46.34.

**3. Operational Definition and Measurement of Variables**

**Readiness to change;** Survey to assess the readiness to face changes using 7 items that are applied by the Shah and Shah (2010). Sample items include: (1) my willingness to work more because of the change (2) my willingness to find a way to make change is a failure. , , '. item using Likert scale, 1 to 5, with provisions (1 = very unlikely and 5 = very likely).

**Transformational leadership;** Measurement of transformational leadership is done by multifactor Leadership Questionnaire (MLQ). Measurements were made with a 5-point Likert scale starts from 1 (strongly disagree) to 5 (strongly agree). Some examples include the question items (1) supervisor I am very optimistic about the future, (2) my supervisor asks me to look at the problem from different angles.

**Attitude towards change;** Attitude toward change was measured using 14 items developed by Vakola et al., (2003) regarding the extent to which respondents approve each item using a 5-point Likert scale (1) strongly disagree to (5) strongly agree. An example of the question's item is "when the program was initiated changes, I emphatically show my disapproval.

**IV. Result**

We conducted EFA to measure the variables. All variables are achieved satisfy cut off with KMO = 0.86. this result show sufficient cut off to continue the analysis. Table 1 shows the regression result from analysis.

**Table 1**

**Regression Analysis**

Variable	Readiness To Change					
	$\beta$	t	p	R <sup>2</sup>	Adjusted R <sup>2</sup>	F
<b>Stage 1</b>				0.0094	0.088	14.694
Attitude toward change	0.232	3.833	0.000**			
<b>Stage 2</b>				0.113	0.107	17.720
Transformational Leadership	0.28	4.210	0.000**			
<b>Stage 3</b>				0.137	0.125	10.997
Attitude toward change	.198	.252	0.012			
Transformational Leadership	0.184	1.976	0.05			

\*) significant at  $\alpha \leq 0.05$

We examine the attitude toward change and transformational leadership as independent variable of readiness to change. We found that attitude toward change and transformational are predictor of readiness to change. Table 1 reports that attitude toward change has effects on readiness to change ( $\beta = .232$ ;  $t = 3.833$ ;  $p < .05$ ), while transformational leadership also has effects on readiness to change ( $\beta = .028$ ;  $t = 4.210$ ;  $p < .05$ ). Finally, attitude toward change and transformational are partially significant toward readiness to change. Unlike independent measure, this multiple regression analysis shows partially supported, because transformational leadership is not supported ( $\beta = .0184$ ;  $t = 4.210$ ;  $p < .05$ ). .

**V. Discussion**

Since attitude toward change is considered as important factor of change management (Faghihi and Allameh 2012), management cannot ignore this factor. When employee attitude is positive, they can affirm to readiness to change. Otherwise, when employee attitude is negative, they can oppose readiness to change as well.

Transformative leader is determinant factor within organization to conducted change management. Leadership put their high responsibility beyond the change itself (Judge and Piccolo 2004, Randall and Coakley 2007, Fugate 2012). This study was developed the effects of employee attitude and transformational leadership with employee readiness for change.

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# Value Relevance of Financial and Non-Financial Information to Market Performance

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## Abstract

This study examines the relevance of financial and non-financial information with market performance. The dependent variable in this study is the cumulative abnormal return (CAR). The independent variables are financial information measured by return on assets (ROA) and non-financial information measured by customer perspective, internal business process perspective, and learning and growth perspective. This study uses multiple regression to analyze the data of 102 manufacturing companies listed in Indonesia Stock Exchange in 2010-2012.

The results show that the ROA significantly affect CAR, it shows that the financial information used by investors to assess the performance of the company, therefore affect investors decisions in investment. And the results of learning and growth perspective which part of non-financial information, also significantly affect CAR. It shows that employee capability is an important matter of concern to investors. Regarding market share is the measurement of customer perspective and internal business process do not support the hypothesis. It shows that companies pay less attention to customer perspective and internal business process is not something to be taken into account by the investor.

**Keyword:** cumulative abnormal return, return on assets, customer perspective, internal business perspective, learning and growth perspective.

## I. Information

The shift from industrial to information ages is caused by economic growth and technological advance. Company can use technological advance to get any information in order to confirm the company's position. On the contrary, any activities the company undertakes can become information to others. Information about company can affect the investor's decision and other parties having interest in the company. Chiung and Ming (2005) suggested that investment decision affect the company's market performance through stock price. Then, the stock price change indicates the change of expected return rate or risk level potentially encountered (Riley, Pearson and Trompeter, 2003; Wiersma, 2008). Financial and non-financial information can be obtained from the company's published annual report. One of information source of company is annual report. The information presented in the company's annual report aims to provide data with stakeholders need to assess the company performance (Hoque, 2005) in the process of making investment decision.

Quick, accurate, timely and relevant information is desirable, so that the way of analysis based only on the past financial information becomes less relevant to assess the company performance (Peak and Dai, 2011). It suggests the importance of a more comprehensive measurement of company performance, including non-financial measure. Coram, Mock and Monroe (2011) said that the analysts use non-financial information in making assessment and investment decision.

Non-financial information can be obtained from the annual report published by company. The information presented in the company's annual report aims to provide data that stakeholders need to assess the company performance (Hoque, 2005) in the process of making investment decision.

Some studies have attempted to prove the value relevance of financial and non-financial information (Riley, et al. 2003; Dontoh, Radhakrishnan and Ronen, 2004; Habib, 2004; Chiung and Ming, 2005; Ghosh and Wu, 2006; Enalby, Mohammad and Said, 2008; Wiersma, 2008; Gonzales, Pradhan and Malsonado, 2011; Al-Momani and Al-shboul, 2013). Nevertheless, previous researches have not given consistent evidence yet. The research on financial information relevance conducted by Riley *et al.* (2003), Chiung and Ming (2005), and Ghosh and Wu (2006) concluded that there is significant value relevance of financial information. This is different from Habib (2004) who concluded that value relevance of financial information was negative in relation to profit management. Meanwhile, Dontoh Radhakrishnan and Ronen (2004) concluded that the value relevance of financial information decreases in relation to stock price.

The studies on the relevance of non-financial information also show inconsistent results. Chiung and Ming (2005), Ghosh and Wu (2006), Gonzales, Pradhan and Malsonado (2011), Al-Momani and Al-shboul (2013) concluded that there is value relevance of non-financial information in relation to the predictability of firm failure, and it was related positively to company performance and financial performance. Riley, *et al.* (2003) and Enalby, *et al.* (2008) concluded that non-financial information is related positively to profit management. Meanwhile Wiersma (2008) concluded that non-financial performance does not have better value relevance compared with the company's financial performance.

The research on the value relevance of financial information in Indonesia proves that financial information has value relevance to the increasing stock price and there was no difference of value relevance between the companies adopting and those not adopting IFRS (Cahyonowati and Ratmono, 2012; Puspitaningtyas, 2012; Andriantomo and Yudianti, 2013). Meanwhile, the studies on the relevance of non-financial information in Indonesia had not concluded the consistent result. Astuti and Syahyunan (2013) showed that non-financial

information has value relevance to the company performance. Whereas, Wondabio (2007) focusing on cost of equity suggested that non-financial information has negative significant value relevance to cost of equity.

Considering literature study, the author wants to explore further the value relevance of financial and non-financial information. While financial information has ever been questioned for its relevance (Dontoh, et al, 2004), it has been proved that financial information is still relevant for the investors to make decision. Meanwhile, Kaplan and Norton (1992) introduced *Balanced Scorecard* (BSC). BSC is a method to assess the company performance using both financial and non-financial measure concurrently. The measurement of non-financial performance, including consumer satisfaction, product innovation, company and employee development, will provide more comprehensive information to investors. Analysts tend to pay more attention to company category using BSC than that not using BSC (Cardinaels and Dirks, 2010). The component of BSC is an elaboration of the company's long term strategy and mission. Thus, assessing a variety of BSC components can represent the upcoming condition and the company's ability in maintaining its sustainability. It indicates that both financial and non-financial information are required by the investor to make investment decision.

Various studies so far have not found many evidences about the relevance of financial and non-financial information to investor decision. Some studies have tried to examine the relevance of financial and non-financial information (Ghosh and Wu, 2012; Coram, *et al.*, 2011; Jusoh, *et al.*, 2008; Riley *et al.*, 2003; Cardinaels and Dirks, 2010), however, their findings have not been conclusive, so that it generates a question of how the relevance of financial and non-financial information affect investment decision. For that reason, this problem is interesting to study. Whether or not financial and non-financial information have value relevance to the investor decision.

Based on the elaboration above, there are research gaps the author considers as important to study further: there has not been a consistent finding about the value relevance of financial and non-financial information. Most findings of researches to which the author refers show that majority non-financial information measure uses the past condition (firm size, firm age, and stock number), but provides less perspective on the future needed by investor. For that reason, this research is expected to be beneficial by using the BSC conceptual framework that can give representation on the future condition of company.

Few studies have measured the value relevance of financial and non-financial information simultaneously. Some studies looked for answer to the analyst tendency in using financial and non-financial information. However they do not serve as overlapping measures. Based on the elaboration above, the problem of research is formulated as follows: Do financial and non-financial information have value relevance to market performance?"

## II. Literature Review

This research used signal theory as the one developed based on asymmetric information problem between two parties. Any information released by the company management is considered by others as signal to do something (Spence, 1973). Information containing good expectation will be responded well and can increase the volume of stock trading that will trigger the increase of stock price. The increasing stock price means the increasing return or profit to the investors. Such the condition indicates that the company performance is getting better.

The relationship between published information, either financial or non-financial (as signal), and the changing volume of trading can be seen from the stock return. Considering the logic of signaling theory, the

information presented in annual report, particularly non-financial information is the signal to be foundation of decision making for the investors. Thus, the financial information equipped with non-financial one is expected to have value relevance to market performance.

### **Value Relevance**

Francis and Schipper (1999) defined value relevance of accounting information as the ability of accounting values in representing the company condition which is reflected on fluctuation of stock price, so that value relevance shows that there is correlation between accounting information and stock price or stock return. The high-quality accounting information is indicated to have strong correlation to stock price, stock return, profit and equity book value (Barth, et al, 2008).

The concept of accounting information value relevance explains how investor reacts toward accounting information publication. This reaction will prove that accounting information becomes the rationale in the process of making investment decision. Scoot (2012:207) stated that value relevance of financial report information is closely related to the concept of profit quality, because it affects the stock price change after the presence of company's profit publication helping the investors to predict the future value of company. The study on value relevance is designed to convince that the accounting information presented has benefit and is useful to assess a company.

### **Company Performance**

Company performance can be measured based on accounting and market calculation. The accounting-based measurement is conducted by using financial ratios measure that can give possible representation on the future condition. Meanwhile, the market-based measurement includes stock return, abnormal return, trading volume activity, Tobin's Q, price to earning ratio, and many more.

The value relevance testing in this research was conducted by using abnormal return in assessing company's market performance, because the investors reaction to information is indicated by abnormal return (Hartono, 2013: 588). Abnormal return is often used as the basis of market efficiency testing. The market is considered as efficient when no marketer encounters abnormal return in a sufficiently long period of time. The proportion of abnormal return is cumulative abnormal return (CAR). This research employed CAR as the company performance measure.

### **Financial Information**

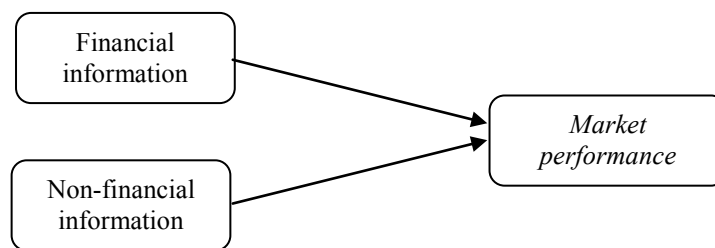
Financial information is obtained from the company's financial statement using fundamental analysis technique. Fundamental analysis is the analysis method based on a company's economic fundamentals. This technique emphasizes on financial ratio and events affecting the company's financial performance, either directly or indirectly. Fundamental analysis is beneficial to find out the correlation of accounting information and market performance. It is expected to be beneficial for investors to predict the expected return rate or the potential risk to occur in their stock investment. The financial statement analysis becomes important because it can summarize so many financial data and can combine report information (balance, profit-loss, capital and cash flow changes) to create the easy numbers in order to interpret financial data (Burkhardt and Wheeler, 2013).

## Non-Financial Information

Investors are more concerned with the future condition of company by predicting it through non-financial information (Johnson and Templar, 2011), for example, customer loyalty, employee learning development and innovations created to maintain the company sustainability. Reichheld (1993) in Nowak and Aderson (1999) suggested that customer loyalty is a more effective method to predict the long term performance of company than the current sales volume. It indicates that the use of financial measure alone will result in numbers not supporting the market-oriented investment in new technology. For that reason, many companies employ both financial and non-financial measures as added-value.

## Conceptual Scheme and Hypothesis Development

This research aimed to examine whether or not there is value relevance of financial and non-financial information to the market performance in Indonesian public manufacturing companies. The conceptual scheme of research is depicted below.



**Figure 1: Conceptual Model of Research**

The information in the company's annual report contains not only financial information, but also non-financial one. Financial information used in this study was taken from Return on Assets (ROA). The result of financial analysis reflected on the company's efficiency in managing its resources. The efficient company means the one that can give positive return and is expected to have survivability and even ability to grow in the future. Financial ratio is a series of efficient assessments on the use of company resources. The company with good performance will have good stock market performance as well. It can be seen from the abnormal return occurring in the capital market. Considering the elaboration above, the hypothesis is formulated as follows.

### **H<sub>1a</sub>: Return on assets has value relevance toward market performance**

Non-financial information uses balanced scorecard method consisting of consumer perspective, internal business process perspective, and learning and growth perspective. Non-financial information representing the strategy which the company takes can provide more comprehensive information. Short- and long-term strategies bringing the company into better condition will be published concurrently with the company's annual report. Non-financial information studied for its relationship to the company performance will result in some authentications, indicating that non-financial measure has significant relationship to the future company performance (Banker, *et al.*, 2000; Ittner, *et al.*, 2003; Hussain, *et al.*, 2002). Based on the statement above, the following hypotheses can be formulated.

### **H<sub>2a</sub>: Market share has value relevance toward market performance.**

**H<sub>2b</sub>: Internal Business Process has value relevance toward market performance.**

**H<sub>2c</sub>: Learning and Growth has value relevance toward market performance.**

### III. Method

The sample used consisted of manufacturing companies enlisted in Indonesia Stock Exchange during 2010-2012. The sample was taken by identifying the data completeness according to specified criteria, and 102 companies were taken as the sample. The sample of research consisted of 102 companies during 2010-2012, so that there were 306 firm years sample. However, in the examination, there was outlier sample (7 firm years sample), so that the sample of research consisted of 299 firm years samples.

#### Financial Variable

The market-based measure of company performance, according to Gani and Jermias (2006), tends to be more objective than the accounting based one. The data on annual financial performance, Return on Assets (ROA), were obtained from Fact Book editions 2011-2013. Return on Assets (ROA) reflects on the extent to which a company can utilize its asset to provide net profit. ROA is estimated from net income divided by the mean total asset.

$$ROA_t = \frac{(\text{Net profit})_t}{(\text{Mean Total Asset})_t}$$

Notes:

Net profit: proportion of income the company receives after subtracted by the cost spent, including depreciation and tax costs.

Mean total asset: Total asset in the beginning of year plus the total asset in the end of year divided by two.

#### Non-Financial Variable

Non-financial variable in this research employed 3 perspectives: customer, internal business, and learning and growth.

1. **Customer perspective (Market Share/MS).** This customer perspective was estimated based on the market place included in the company's annual report. This measurement was used in Ghosh and Wu (2012), measuring it by using customer satisfaction, based on market share (MS). Such measurement was conducted by comparing the company sales with the total industrial sales in one same sub sector. Industrial sale employed sale volume approach to all go-public companies in the same sub sector.
2. **Internal business process (IB).** This perspective was estimated by using dummy variable to capture the presence of business process undertaken for internal company. Following Ittner et al (1997), number 1 was used if the company employed words explaining the presence of education or training held to improve the employee's knowledge and skill. Meanwhile, number 0 was used if the company does not mention the presence of activities undertaken to improve the employee skill.
3. **Learning and Growth (LG) perspective.** This perspective assesses whether or not learning and innovation improving the internal business process can improve the production efficiency, create new product, improve competitive competency in external product market, improve added-value for the customers, penetrate into new market, increase income and in turn improve the shareholder value (Kaplan & Norton, 1992). This

variable proxy employed dummy variable by giving notation 1 if the company reveals the activities pertaining to learning and growth and notation 0 if the company does not reveal those activities because it is considered as not making improvement over learning and growth.

### Dependent Variable

Dependent variable in this research was cumulative abnormal return. The data measurement was conducted using market adjusted model, in which abnormal return is the difference between expected return and actual return projected through market return. The calculation of actual return employed data of 2009-2012 carried out using the following method:

$$AR_{it} = R_{it} - E(R_{it})$$

Notes:

- ARit = *Abnormal return* of share i in t period
- Rit = *Actual return* of share i in t period
- E(Rit) = *Expected return* of share i in t period

Then, *cumulative abnormal return* is estimated through summing the *abnormal return*.

$$CAR_{i,t} = \sum AR_{it}$$

Notes:

- CARit = *Cumulative Abnormal Return* of share i in t period
- ARit = *Abnormal return* of share i in t period

### Statistic analysis

This research employed regression analysis to correlate both financial and non-financial information to cumulative abnormal return in manufacturing companies in ISE during 2010-2012 with SPSS (Statistical Product and Service Solution) version 20. Regression analysis is a study on the dependent variable's dependency on one or more independent variables. The multiple regression model is shown in the following formula:

$$CAR = \alpha + \beta_1 ROA + \beta_2 MS + \beta_3 IB + \beta_4 LG + e$$

Notes:

- CAR : *Cumulative Abnormal Return*
- ROA : *Return on Assets*
- MS : *Market shares*
- IB : *Internal Business Process*
- LG : *Learning and Growth*
- e : *error*

## IV. Conclusion

### Result

The data analysis of research was started with classical assumption test, including multicollinearity, heteroscedasticity, autocorrelation, and normality tests. Then the mapping was made on some statistic parameters of research data. The result of statistic descriptive on 299 samples used in this study is presented below.

**Table 4.2. Statistic Descriptive**

Variable	Minimum	Maximum	Mean	Standard Deviation
CAR	-0.99	1.81	0.2755	0.53883
ROA	-0.75	0.55	0.0467	0.12380
MS	0.00	0.78	0.1271	0.17068
IB	0.00	1.00	0.3211	0.46767
LG	0.00	1.00	0.8896	0.31387

Notes

CAR	=	Cumulative Abnormal Return
ROA	=	Return on Assets
MS	=	Market Share
IB	=	Internal Business Process
LG	=	Learning and Growth

Source: Result of data processing on manufacturing companies during 2010-2012

The result of hypothesis testing on the value relevance of financial and non-financial information to market performance in Indonesian manufacturing public companies is as follow:

**Table 4.7. Hypothesis Testing**

	Exp Sign	Coefficient regression	of $t_{stat}$	Sig
ROA	+	.256	<b>4.441</b>	<b>.000</b>
MS	+	-.090	-1.531	.127
IB	+	.006	.094	.925
LG	+	.107	<b>1.883</b>	<b>.061</b>
$F_{stat}$		6.164		
$F_{probability}$		0.000		
$R^2$		0.077		
Adj. $R^2$		0.065		

#### Limitation

The limitation of study is that this research is not supported by qualitative data enabling all aspects of analysis to be obtained and to give a more complete description including potential threat and opportunity that can be utilized by the company. In addition, the performance assessment w Many studies have used this profit ratio (ROA) to find out its relevance to company performance and stock performance (return), because it is considered to have strength as comprehensive measurement of financial statement. In addition, estimating ROA is very easy to do and to understand. The analysis using ROA can also be applied to any unit of organization responsible for profitability. Meanwhile, the weakness of ROA measurement is that it tends to focus on short-term objective. A project measured using ROA can improve the short-term objective, but contain negative consequence in long-term. The strategies of work relation termination, marketing budget reduction, and cheaper material use are the ways that can be used to achieve the targeted profitability but can reduce the product quality.

In line with Chiung and Ming (2005), the profit component more explains the company value than profit obtained. Similarly, the findings of current study are consistent with Guizani and Abaoub (2012), in which ROA is related positively and significantly to company value or abnormal return of stock. ROA is used to measure the effectiveness of company in providing profit by means of utilizing the assets which has. The higher the ROA, the higher is the stock return of company because the investor considers that the company performance is better;



therefore investor is willing to buy it. Thus, the result of research on ROA proves that financial information represented by ROA has value relevance or supports the hypothesis.

Market share is the measurement of customer perspective, and a part of non-financial information, the result of which does not support hypothesis. A company's market share actually has a very important meaning because it can be used to prove a company's strength in competitor neighborhood. The achievement of market share becomes one of targets to be achieved by nearly all business sectors, but the result of hypothesis testing indicates that there is no communication made by the company to the public, so that any attempt of performance achievement cannot be absorbed by market. If there is no information absorbed by market, therefore there is no feedback that the company can receive.

Kaplan and Norton (1992) suggested that in customer perspective, there are two measurement groups: core customer measure group encompassing market share size, and return level of each new customer, and value proposition group encompassing product or services, customer relationship, image, and reputation. The result of hypothesis testing in this research showed that market share does not have value relevance. One reason of why this situation occurs is that the company pays less attention to customer perspective measurement aspect in Indonesian companies.

Regarding internal business sector as a part of non-financial information, the result does not support hypothesis as well. Eventually internal business process the company undertakes continuously can create innovations giving added-value to the product produced so that it creates a competitive advantage compared with the competitor product. The innovation made by the company is the manifestation of understanding on market demand and want to bring the market need together with product supply consistent with market expectation. As Drucker (2003) suggested, most innovation in business occurs through methodological analysis on the existing opportunities. Those opportunities can be unexpected occurrences, incongruities of various kinds, process needs, change in industry or market, demographic change, change in perception and new knowledge. It proves that innovation is related positively and significantly to the company performance. However, innovation also serves as a mediator that confirms the relationship between market orientation and the company performance.

Recalling that the samples used in this research are manufacturing companies, in which the competition occurs very tightly because of so many performers entering into similar business, this sector is identical with product innovation in order to fight against the competition. In addition, internal business process is undertaken continuously in the attempt of strengthening the market and of maintaining the customer trust and loyalty. However, the result of hypothesis testing in this research showed that internal business process variable is not something to be taken into account by the investors.

Regarding learning and growth, Kaplan (1996) suggested that the company should pay attention constantly to its employees, monitor its employees' welfare and improve their knowledge because the improvement of employee knowledge will improve their ability of participating in the achievement of company objective. The employees' ability can be measured with its profitability level. Meanwhile, the information system ability is measured from the improvement of employees' quality and productivity affected by access to information system the company has. The easier the information is obtained, the better is the employee performance. The measurement of information system is conducted by measuring the percentage availability of information needed by employees on customers, production cost, and etc. Although information has been available,

motivation is still required. Motivation is measured through the extent to which recommendations and methods proposed by the employees support the efficiency and productivity of company. The result of current research showed that LG variable has value relevance so that the improvement of company empowerment from employee capability aspect becomes something important to be considered by the investors.

### **Implication**

The implication of research is that a performance assessment system should be developed adjusted with the different needs of companies in order to be consistent with the objective to be achieved. In addition, the performance assessment should be based on the position or the stage where a company is. It is intended to help find its competitive advantages. Market performance is highly affected by the company performance, for that reason the management of company resource should be taken into account in order to be always under control in order to achieve the objective of research.

### **Limitation**

The limitation of study is that this research is not supported by qualitative data enabling all aspects of analysis to be obtained and to give a more complete description including potential threat and opportunity that can be utilized by the company. In addition, the performance assessment which not made for any types of industry makes the result of research less effective.

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## **Revitalization of Cashew, Efforts to Use Critical Land in Wonogiri District – Central Java**

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### **Abstract**

Understanding the dynamics of the countryside is one of the main keys in the formulation of agricultural development policy and economic development of a region. In line with the ongoing development process in Wonogiri, rural economic structural changes dynamically. Structural changes of the rural economy is characterized by aspects of farming, rural employment, consumption patterns, income distribution, real income, openness agri-based information access cashew. This study aimed to determine the structural changes in the rural economy based agribusiness Wonogiri cashew from the aspects of farming, distribution, income, consumption patterns, employment resulting in structural changes that have an impact on the accessibility of rural economic structure (openness) to information and increasing quality of human resources (HR) are characterized by increasing levels of education of the workforce, consumption and expenditure patterns of households as the implications of the growing prosperity cashew farmers. This study is motivated that cashew is a commodity Wonogiri. The implications of this study are expected to be obtained findings for the formulation of rural development planning and implementation of policies pursued by the granting of freedom in accordance with the resources and agro-ecosystem diversity are available in units of rural areas by taking into account the comparative advantages of the countryside. Such circumstances will accelerate the pace of economic growth and trade between rural resulting in increased equalization of economic activity and income of farmers and communities.

**Keywords:** rural economy, revitalization of degraded land, the agribusiness cashew

## I. Introduction

Wonogiri district is one of districts that located at the area of Bengawan Solo headwaters. The watershed of Bengawan Solo River is a super priority watershed in Indonesia due to an alarming condition of its water catchment and high water erosion in this area, as well as decreasing land productivity. This condition, especially fast water erosion will make sedimentation process in the Gajah Mungkur dam become quicker. According to the study conducted by Water Shed Management Technology Center (1995) it is predicted that Gajah Mungkur dam will be full with sediment in 27 years. Some experts predict that this condition occurs due to socio-economic condition of the community, especially they who live around Gajah Mungkur dan and in Bengawan Solo headwater area.

The structure of income of the community who live around Bengawan Solo headwater area, especially in Wonogiri district has a possibility to pose a big chance for the community members to perform agricultural business, which in the other side will contribute to the level of erosion. Even though community activity in agricultural process is not fully understood, but it caused by the pressure in fulfilling community's needs or because the dam has not provide significant effects on community's socio-economic aspect. The limitation in the source of income that can be relied on will have an impact on the tendency of repressive action from community in utilization of resources around them.

The result of limited source of income which leads to a diverse income structure of a community makes there are many community member who has not prosperous or below the poverty line. The poverty usually causes natural resources degradation which leads to natural disaster in the end. This is exactly what happens to Bengawan Solo headwaters. Due to a limited source of income, then the community tends to utilize sources around them. One of the sources is the utilization of land in Wonogiri district, which mostly are in the form of rainfed paddy field, idle land, and dry land, as an agriculture input. These kinds of land have potency for cashew plantation because cashew is a pioneer plant in the dry land, both in moor or rainfed paddy field. Thus, it is normal reasonable that Wonogiri district government launch a program to utilize their idle lands, such as yard, common forest, and country forest to plant cashew. In line with the effort of local development based on the optimization of local potencies, then the utilization of potential land is supported by Wonogiri district government policy that focuses on the development in the agricultural sectors (Renstra Kabupaten Wonogiri, 2011).

This is a very interesting phenomenon to be studied because the community starts to abandon the plantation of cashew tree that was planted as a pioneer plant in dry land and to hinder water erosion. The community's argument is that their primary needs have not fulfilled and the rivalry in the land usage for crops. This study examines the effort to revitalize the cashew cultivation as an effort to utilize dry land, as well as the effects that it inflicts to the rural economic development in Wonogiri district. The purposes of this study are to (1) diagnose the fluctuation of vulnerability of

cashew plantation and its distribution, and (2) mapping and analyze problems in the production subsystem and agriculture, as well as its distribution and marketing channel in Wonogiri district region .

## **II. Literature Review**

### **Agricultural Sector in the Economic Structure**

Structural transformation of Indonesia economic since 1970 is characterized by the decrease in the percentage of primary secondary, and tertiary agriculture sector on GDP, the decrease is about 14.8% and 17.8%. This condition is followed by decreasing role of agriculture sector in the rural areas, including Wonogiri district that records the decrease in the percentage of agriculture sector on GDP from 4.40% in 2006 to 4.34% in 2009, this condition triggered Wonogiri district government to promote the development of agriculture, including cashew in the crop subsector.

As an overview for cashew production that becomes a leading commodity in Wonogiri district, we embedded the data of production later in this article (Bappeda Jawa tengah, 2000; Dinas Pertanian Tanaman Pangan Jawa Tengah, 2001). Because of this fact, the development of cashew in Wonogiri district is directed to support the center for economic growth. This policy is taken by considering the potency in Wonogiri district to develop cashew, which is expected will provide a multiplier effects in the supply of labor and the opportunity to develop processed products.

The potential areas for cashew in Wonogiri located in five center points namely the subdistrict of Jatisrono, Jatiroto, Ngadirojo, and Kismantoro. While if viewed from the development of harvested area, every year shows a fluctuating harvested area with 'increase-decrease-increase-decrease' trend, which shows that there is instability of cashew planting in Wonogiri district. Even though the production level per year fluctuate, but the average production of 3,456.5 tons per year or 287kg/th. This number still has an opportunity to be increased, due to the availability of land. This is why cashew from Wonogiri district becomes a commodity that has a competitive advantage, so that the production of cashew provides a significant contribution to the availability of cashew in the Central Java province.

### **The Economic Valuation of Cashew Commodity**

Cashew is an export commodity which has various functions, start from its root, trunk, leaves, and its fruit. Cashew can be fried and providing a highly nutritious food, while cashew apple can be processed into some forms of processed foods such as cashew apple juice, cashew apple wine, dried sweets, apple cashew jam, and canned apple cashew. Wonogiri district has a wide dry land which can provide an illustration of how big the opportunity it provides to be used as production factor of agriculture. Cashew has a good prospect in fulfilling the demand of local, national, and



international market. Recently, the production of cashew in Wonogiri district tend to decrease both in terms of quality and quantity, thus, Wonogiri district cannot utilize the opportunity at their best.

Cashew as a commodity from people plantation in Wonogiri district has a great potency to be developed. The opportunity of a prospective market is available, wide land, and number of farmer which also fully available is a challenge for Wonogiri district to increase their cashew production and their cashew export. The increase will obviously increased farmer's income from land usage. The orientation of cashew plantation development is directed to the fulfillment of the feed and food industry, by considering the product of these industries is normal goods (elastic to the increase of income). From the market side, the potency for marketing cashew still faces an increase. It can be seen from the increase in the demand as an export commodity.

By keeping this information in mind, then we can argue that the prospect for developing domestic and international market is promising. The domestic market for cashew is still widely open because up to this day the production of cashew in Indonesia cannot fulfill national needs and demands. The increase in the demand and the sparse international market of cashew shows that the international market of cashew is widely open for new exporters. The potency of cashew will provide wide opportunity for farmers and rural economic.

Many parties are needed to markets the production outputs. This is why related parties need to be included in formulating the program, from production processes up to marketing. The program, according to Bahtiar *et al.* (2002) includes: (1) socialization of storage technology that can be used by farmers to avoid the difference in the supply and demand, (2) proper provision of production facilities (proper in term of type, quality, and price and location), (3) provision of agricultural credit for cashew commodity, and (4) the absorption of production output based on quality standard of output (assurance from the government/private sectors). By applying these steps in improving cashew production and marketing, it is expected that cashew production will increase farmers' income and well-being, as well as promoting rural economic growth which became one of the efforts to achieve food resilience.

### III. Method

This study was conducted through several stages; the first study was conducted to answer the questions in: (1) the production growth of cashew and an efficient cashew plantation and (2) marketing system for cashew. The researchers used purposive technique in deciding study location, thus the researchers choose five sub district that become the center for cashew production, namely Nguntoronadi sub district, Ngadirojo sub district, Jatisrono sub district, Jatiroto sub district, and Manyaran sub district. The researchers then choose one hundred farmers as respondents.

The sampling of marketing agency was conducted through snow-ball sampling. According to Suratna, *et al.* (1995) snowball sampling method is sampling method with small group that asked to shows or choose their friends. Then their friends are asked to choose their friend, so forth until

this group becomes bigger just like a snow-ball. Snow-ball method is a sampling method by choosing key person first, and then the choice for next respondent depends on the first informants. With this method, the researchers want to know exactly about the flow of cashew commodity from producers to consumers, thus the marketing chain of cashew can be identified. The researchers used primary and secondary data. The researchers employed (1) analysis of cashew plantation and (2) descriptive and Cost Margin Analysis, as method of analysis.

#### IV. Conclusion

##### Results

Administratively, Wonogiri district is divided into 294 villages in 25 sub district. The largest sub district is Pracimantoro, with 14,214.3245Ha (7.7% from total area of Wonogiri district), while the smallest sub district is Puhpelem, with 3,161.5400 Ha (1.7% from total area od Wonogiri district). Cashew exists in most of sub district, but the largest cashew farm is Ngadirojo sub district. Base on the data from Dinas Perkebunan dan Kehutanan of Wonogiri district, the area of cashew farm is 14.496 ha (70.19%), while 1.851 ha unproductive, and 4.305 ha of new plants. The

The biggest family member of cashew farmers is in the group A is smaller than 3 people. Farmers' family members are the labor who participates in cashew plantation, thus, to take care of cashew trees the farmers only have small number of labors which will affect in less intensive management pattern. The types of land in which the cashew is planted are farm, moors, and forest. Below are the information of the average plants in each type of land.

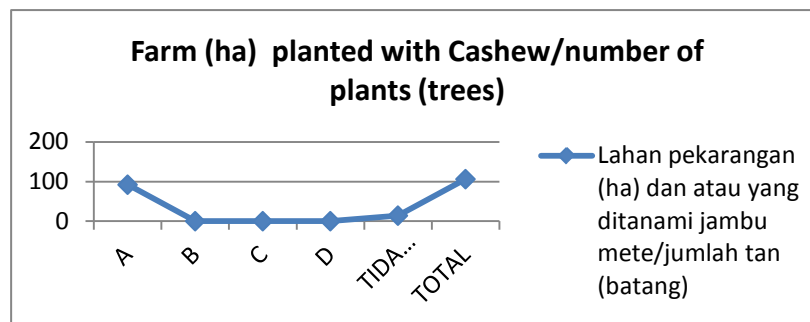


Figure: 3. Graphic of the number of Cashew in farmers' yards

From the graphic we can see that the average cashew plants in farms located in the classification A (< 200 trees). Similar result is found in the moors with the average of < 200 trees, as we can see from graphic below.

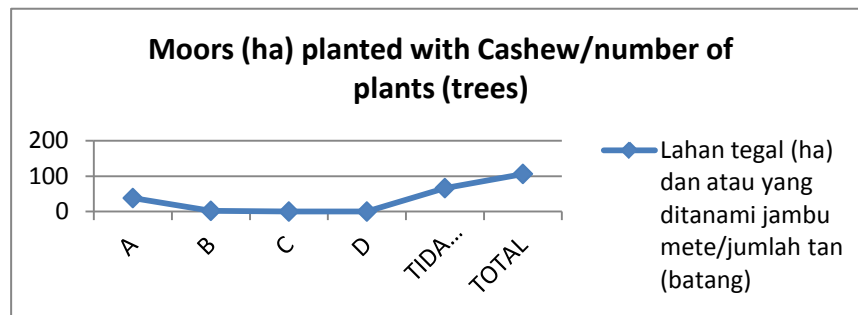


Figure: 4. Graphic of the number of Cashew in moors area

However, the average plants for forest area only reach < 100 trees, because this land is owned by Perhutani and farmers used this land by paying rent to the Perhutani which is known as “pesanggem”. This means that farmers only utilize the land, but the land is owned by the government cq PT. Perhutani, as we can see in the graphic below.

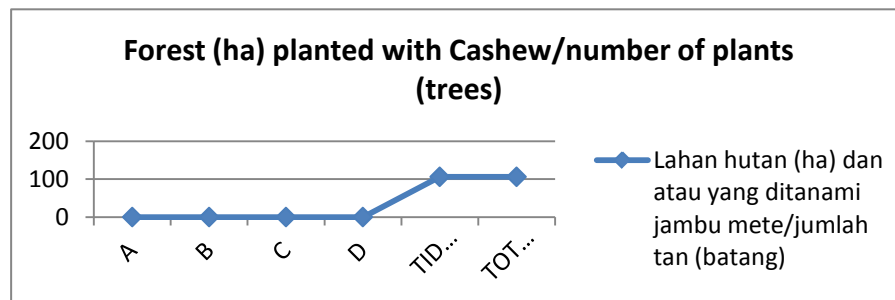


Figure: 5. Graphic of the number of Cashew in forest area

After reaching five years, cashew trees will start to produce fruits. In a year, the farmers can harvest around 7-8 times on average as showed by position D in the graphic below.

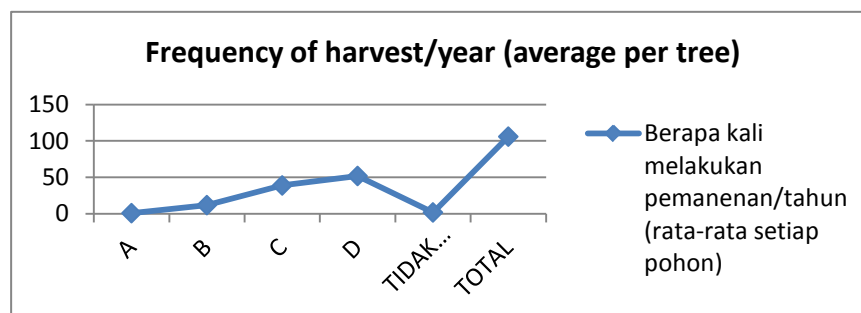


Figure: 6. Graphic of the harvesting frequency per year

The average fruit that can be harvested from each tree per year is < 5 Kg cashew apple or around 11-20 kg cashew nuts per harvesting time, as presented in graphic 7 and 8.

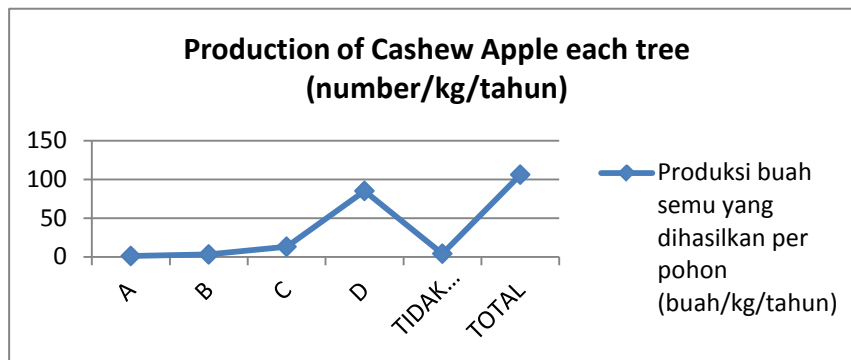


Figure: 7. Graphic of Cashew Apple production per tree

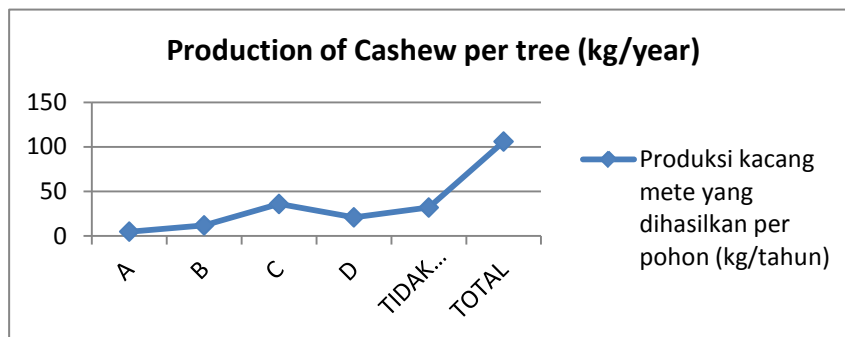


Figure: 7. Graphic of cashew production per tree

From the harvest, farmers can acquire 5-8 Kg cashew apple each tree for Rp 2.000 – Rp 2.750 per Kg. While the production of cashew nuts each tree can reach 11- 20 Kg for Rp 15.000/Kg – Rp 30.000/Kg, thus the farmers can acquire Rp 165.000 – Rp 600.000 for each tree. The farmers usually get the information about selling price from various sources, such as groups/medias, ask their neighbors, or visit the markets. The results shows that most of the farmers get the information about selling price from observing the price in the markets as shown in the graphic below.

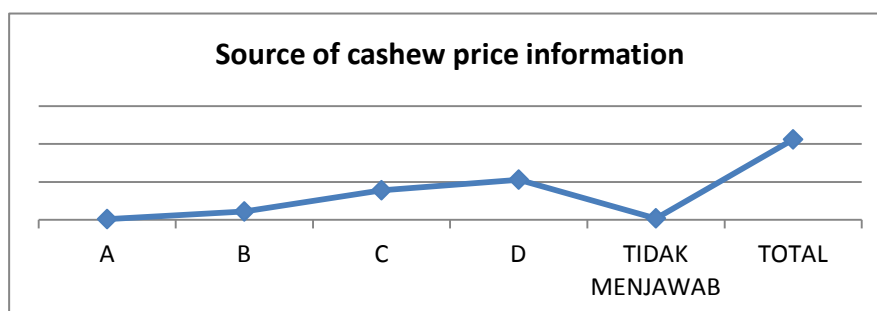


Figure: 8. Graphic of source of information about cashew price

Hutabarat (1988) citing the arguments of Johnston and Mellor (1961) that Lewis development model focused on the importance of agriculture as driving force of economic development and a market for industrial products is a means to achieve it. If it linked with agriculture sector in

Wonogiri, especially for commodity market of cashew, this kind of market has a potency to be driving force of economic development through selling price as an indicator. The development in the price of cashew fluctuates according to season or demand. In the harvesting season, cashew price is relatively lower, but when demand increased for example around Idul Fitri day, Christmas, or new year celebration, cashew price can reach Rp 80.000/Kg – Rp 95.000/Kg. In general, trade system of cashew started from farmer until end user can be illustrated as follows:

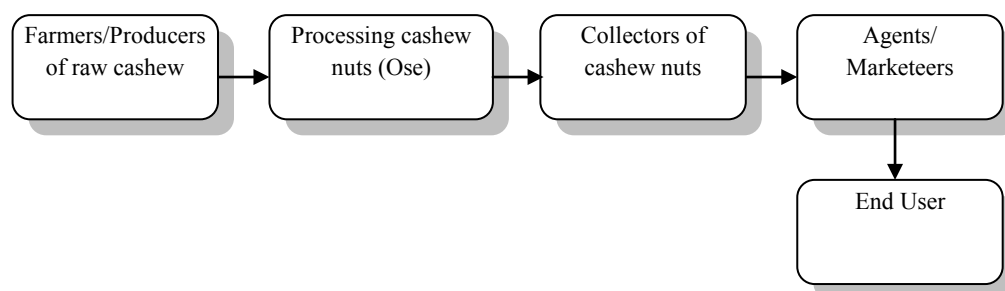


Figure: 9. System of cashew trading channels in Wonogiri District

In the trade system of cashew commodity, the first person that becomes the main source of cashew is cashew farmers who produce raw materials (in this case is cashews logs). Then the farmers distribute the cashews logs to the processors of cashews logs which supported by capital, management, and all components of labor that involved in the production processes. The third party in this system is cashew nuts collectors, the parties who have a big stock of ready-to-process cashew nuts. There are two kinds of collector, village-based collectors and sub district-based collectors. These collectors then sell their stock to the agents or wholesalers, who will then sell their stock to retailers or the other sellers in traditional markets or intercity sellers. The sellers then distribute the cashew nuts to secondary processors (process raw cashew nuts into fried cashew nuts). The last party of this system is household consumers. Marketing system involved in this chain is a traditional system that rely on word of mouth and proactive system through telephone or mobile phone line. Payment delivered directly in cash payment or transferred via banking account depends on the agreement between the sellers and buyers.

Besides being sold as fried cashew nuts (with salty or sweet and spicy variant), it is also marketed as raw cashew nuts. Besides being sold to the house hold consumers, cashew nuts also being sold to the industry to be processed as a mixture in chocolate, cake, etc. However, cashew apple can be processed to make abon, syrup, and sweets. The qualities of cashew nuts can be seen from its appearance. A good cashew nut is the one that undamaged (not split into two parts), this is the grade A and is the most expensive. The damage in the cashew nuts is highly dependent on the peeling process and the skill of people who peel it. Beside its physical appearance, a good cashew nut also has a yellowish color, savory and a little sweet in taste. This kind of cashew nuts can be sold with high price and are qualified for exported. The second grade or grade B is cashew nuts that have damage (split). The last grade or grade C is the one that crumbled. For cashew nuts sold

as raw nuts, there are more than undamaged expectation but producers also have to be careful in its drying and packing process to get the best results. The classification of cashew nuts may beneficial for consumers; however this classification also posed a moral hazard for the producers. There are producers who practiced unethical steps to get grade A cashew nuts by gluing damaged cashew nuts to make it looks undamaged. This condition is widely known by consumer and consumers can taste the difference, made them disappointed.

The raw materials of cashew nuts are cashew logs. To process peeled cashew nuts into fried cashew nuts, producers need cooking oil and fuel. The availability of raw materials for cashew nuts depends on harvesting season. In the harvesting season, the raw materials come from the farmers, while in the non-harvesting season the raw materials come from the collectors who have a stock from the harvesting season or by ordering from the other city (or other island).

Tool used to break the logs up to this time is traditional kacip (cashew nuts peeler), while the kacip from the government cq Dinas Perindustrian dan Perdagangan does not help because it damages the nuts, thus decreasing its quality. However, cashew nuts breaker purchased from abroad can only be used for same size nuts, whereas the size of cashew nuts is varied. In the marketing process of cashew nuts, the cost along the channel is highly dependent on the condition of transportation facilities and infrastructure in Wonogiri district. The data of the availability of transportation facilities and structure in Wonogiri district is presented in graphic below.

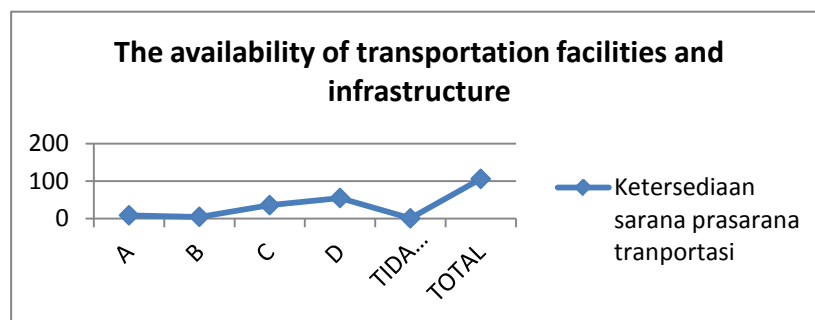


Figure: 10.

Graphic of the availability of transportation facilities for cashew distribution in Wonogiri district.

Most of respondents stated that the transportation is available and they have their own means of transportation or in position D. Respondents asked to answer question on the type of market they utilize to sell their products are village markets, sub district markets, or stores/merchants in the areas that do not have a village market. Their answers indicate that the highly available facility to sell their cashew nuts is village markets, as we can see in the graphic below.

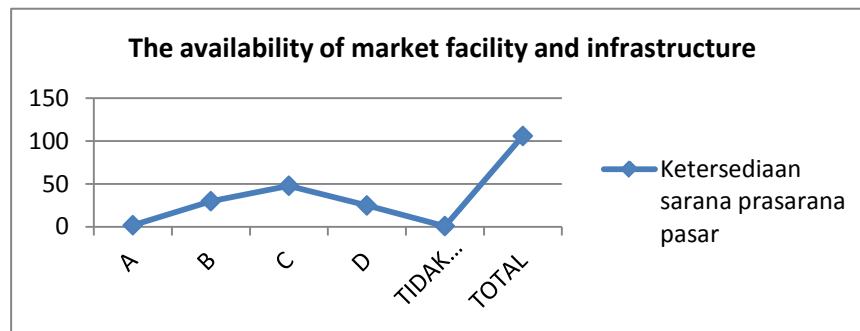


Figure: 11.Graphic of the availability of market facility of cashew inWonogiri district

### Conclusion and suggestion

The conclusion that drawn from this study is that (1) the results on the analysis of fluctuation in cashew plantation and its distribution showed that the vulnerability located in the procurement of seed and the decrease in the number of tress due to poor treatment and the competition in land usage, (2) mapping and analysis of cashew problems in production subsystem and farming resulte in the finding about the factor that hindered its development. The problem is the decreasing number of cashew trees and the age of cashew trees without rejuvenation, (3) distribution and marketing in the regional Wonogiri district is hindered by problem in raw materials supply of cashew nuts. The supply is fulfilled in the harvesting season, in the non-harvesting time the raw materials are purchased from the area or district outside Java island (such as NTT or Celebes). The researchers suggest that the vulnerability in this business can be solve by revitalization of the trees in various kinds of soil, whether in the land that is highly suitable or marginal lands or dry land.

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## Differences of Perceived Environmental Uncertainty between International and Domestic Brand Hotel Managers in Shanghai, and Their Strategic Management Process

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### Abstract

The purpose of the study is to identify the importance of the hotel industry's business environment, and tries to examine the difference of hotel managers' perceived environmental uncertainty (PEU) as well as find the relationship between the PEU and the strategy management processes. In this study, research data was collected by a survey questionnaire mainly focused on the international brand hotels and domestic brand hotels in Shanghai. Using Statistical package PASW WIN 18.0, descriptive statistics analysis, T-test analysis and multivariate analysis of variance were conducted. The findings of this study indicated that hotel managers' perceived environmental uncertainty is significantly different between international brand hotels and domestic brand hotels in Shanghai. It also reveals that some of the sectors of hotel managers' PEU are significantly different by strategic functions, resource allocation and search process, while no significant difference exists in PEU based on subunit power.

**Keywords:** Perceived environmental uncertainty; Strategic management process; Hotel managers in Shanghai

### I. Introduction

In the 21st century, with the increasing levels of globalization in hospitality industry, hotel companies are facing an extremely complex, dynamic operating environment. In order to survive and develop in environmental circumstances with high levels of uncertainty, hotel managers need to different management approaches as well as understand the implication of future impacts, both positive and negative, of the changing environment in which they operate. The strategy which is dependent on existing environment circumstances can produce the best results (Miles & Snow, 1978). In many strategic management and organization researches, it has continually

emphasized the importance about the adaption of firm's strategy and environmental conditions, this kind of relationship is not only as a necessity for the economic performance of the firm, but also essential to the firm's survival (Kristian, 2008).

In the changing hospitality industry, hotel managers obtain a large part of their essential business information from the environment external to the organization, and they undertake environmental scanning which is fundamental to their strategic planning process in order to help adapt the organization to changing environmental conditions (Ebrahimi, 2000; Kumar, Subramanian & Strandholm, 2001; Okumus, 2004). It has been argued that manager's perceptions of environmental uncertainty (PEU) influence managerial activity such as environmental scanning and strategy making (Lant, Milliken & Batra, 1992; Yasai-Ardekani & Nystrom, 1996; Priem, Love & Shaffer, 2002).

Duncan (1972) defines that one of the determinants of the level of uncertainty present is the dynamism of the environment. In order to explore the dynamism of an industry, it is therefore of interest to measure perceived environmental uncertainty. The effect of the environmental conditions and characteristics on the perceptions of strategy makers and the strategic making process has grown increasing interest to researchers (Bourgeois, 1978; Lindsay & Rue, 1980; Dean & Sharfman, 1993; Kumar, Subramanian & Strandholm, 2001, Naceur, Azaddin & Attahir, 2003). The growing importance of strategic planning recognition concerns that there is a need for organizations to establish formal linkages between external elements of the organization and internal decision making or resource allocation functions (Choi, 2006).

Many other studies have used uncertainty to measure and specify the environment's effects on the organization's strategy making process and on the perceptions of strategy makers themselves (Dev & Olsen, 2000). However, it seems most of the hospitality environment and strategy related researches have been conducted in relation to the North American or Western domain (Jogaratnam, 2005). Beyond this, perceptions of environmental uncertainty have been found to differ significantly across nations (Miller, 1993); there also seems little empirical confirmation of observations relating to organization-environmental relations in the Asian context (Jogaratnam & Law, 2006).

In these regards, this study confined to do the research within the Asian context, especially the China context. After thirty years of rapid growth in the economy, China has now become one of the world's most attractive destinations for tourists, which means great opportunities for the development of hotels. Seeing from the past few years, China has already paced up towards internationalization, for example the Beijing Olympic Games held in 2008, 2010 Shanghai World Expo, all of those factors created a good business environment for hotel industry development in China.

The vast hotel market, the improving business environment and favorable government policies provided international hotels fertile land to grow up and expand in Chinese market. The fast expansion of the international hotel chains into China makes the competition fiercer than ever. Meanwhile, China's domestic brand hotels are also facing challenges and opportunities from the external environment and internal environment.

As such, this study attempts to extending the line of research in hotel management and specifically to exploring the difference in perceive environmental uncertainty and strategic management process, especially applies to the contingencies faced by the international brand and the domestic brand hotel managers in Shanghai, China. The reason for choosing Shanghai as the centered research district is that, Shanghai is now

home to major international and local hotel brand that are highly representative of the industry as a whole and include both local and international based hotel groups that own, manage, and operate hotels throughout the world. Shanghai's hotel industry is highly competitive as it is the China hub for many international chains and regional tourist markets.

According to all above background analysis, this study focuses on identifying the importance of the hotel industry's environment, and tries to 1) find the pattern of hotel managers' perceptions of their hotels' internal strengths and weaknesses and its external opportunities and threats; 2) To explore the hotel managers' PEU differences between the international brand hotels and the domestic brand hotels in Shanghai, and; 3) To examine the relationships among the hotel manager's environmental uncertainty, environmental characteristics and strategic management processes.

## II. Literature Review

### *2.1 Perceived Environmental Uncertainty*

In order to survive and succeed in the business, the organizations should continuously monitor, respond and adapt to the influences of the external environment (Phua, 2007). Environmental uncertainty refers to the degree, or variability, of change that characterizes environmental activities relevant to an organization's operations (Child, 1972; Drago, 1998). Although organizations are constrained by their environment, managers have the opportunities to make their strategic management on the environment uncertainty dimension (Bowyer, 1972; Miller & Leiblein; 1996; Cheng & Kesner, 1997). Environmental uncertainty arises when managers perceive their business environment or one of its components as unpredictable (Milliken, 1987). They may feel uncertain about the direction of future technologies, about changing consumer preferences and social norms, or about the operational impacts of changing regulations. The managerial perception of the potential role of the natural environment as a competitive opportunity may vary depending on the type of environmental uncertainty that managers perceive (Sharma, Aragón-Correa, Rueda-Manzanares, 2007). A methodology for scanning that environment is presented from the perspective of perceived environmental uncertainty, according to its dynamism and complexity (Juan & Vanessa, 2006).

Perceived environmental uncertainty (PEU) is the difference between the amount of information required to make a decision and the information already known (Galbraith, 1977). In today's fast-paced information age, managers are able to expose much more information than they can possibly perceive (Hambrick, 1982; Jogaratnam & Law, 2006). Therefore, they faced with limited time and capacity for information processing and the inability to comprehensively understand the environment must be selective in their approach to scanning (Hambrick, 1982; Daft, Sormunen & Parks, 1988). Perceived environmental uncertainty is a way of examining the environmental uncertainty as a perceptual phenomenon (Ajibolade, Arowomole & Ojikutu, 2010). It is a strategic level constructs that measure upper management's perceptions of their external environment (Gul & Chia, 1994).

There are numerous conceptualizations of environment uncertainty explored in the literature (Lawrence & Lorsch, 1967; Duncan, 1972; Pfeffer & Salancik, 1978; Milliken, 1978; Keats & Hitt, 1988, Sawyer, 1993; Steensma, 2000; Kreiser & Marino, 2002). In the strategic management and organization literature history, the two most widely applied approaches to measuring perceived uncertainty are those of Lawrence and Lorsch

(1967) and Duncan (1972). Lawrence and Lorsch (1967) used subscales to evaluate the degree of uncertainty in three different organizational areas: research, production and marketing. But Tosi, Henry, Ramon & Ronald (1973) in a separate survey found this instrument to be unreliable.

A second major instrument was developed by Duncan (1972), who evaluated uncertainty along three internal and five external environmental components: customers, suppliers, competitors, socio-political, and technological. He argued that there are two main dimensions to uncertainty: complexity, the number of environmental elements and the interdependence between these, and dynamism, or variability, the range of outcomes. But both the Lawrence and Lorsch (1967) and the Duncan (1972) scales have been found to lack reliability (Downey, Hellriegel & Slocum, 1975).

The uncertainty measurement instrument developed in this research resembles most closely that of Miles and Snow (1978). Miles and Snow (1978) classified the environment into six sectors: suppliers, customers, financial markets, competitors, labor unions, and governmental/regulatory agencies. They classified each item on a 7-point scale ranging from "predictable" to "unpredictable." Daft, Sormunen & Parks (1988) used a similar set of six environmental sectors: competition, customers, technological, regulatory, economic, and socio-cultural in evaluating uncertainty, executive scanning, and firm performance. They found that executives in high-performing firms scanned more frequently those sectors that were perceived to have higher levels of uncertainty.

Milliken (1987) proposed to deconstruct environmental uncertainty into state uncertainty, effect uncertainty and response uncertainty. Although Milliken's (1987) specification of a three dimensional uncertainty construct has enjoyed much attention, relatively little research has focused on the possibility of interaction or interdependence of the three types of uncertainty. In later empirical work, Milliken (1990) found that there was no significant relationship between state and response, and between effect and response uncertainty, yet concluded that the more certain managers are that they are facing a threat; the less certain they are of how they should respond.

Olsen, Murthy and Teare (1994) stated seven categories of environmental variables which used to assess the uncertainty: (1) suppliers of food, beverage and operating supplies, (2) competitors' actions, (3) customers' demand, (4) financial/capital markets, (5) labor markets, (6) government regulations, and (7) technological developments. Other scholars like Miller and Shamsie (1999), Priem, Love, and Shaffer (2002), Kristian (2008) also continually did the research on the measurements of perceived environmental uncertainty.

### **III. Methodology**

#### *3.1 Research model*

Much of the theoretical and empirical work on uncertainty has focused on perceptions of environmental uncertainty in the firm's environment (Tosi & Slocum, 1984) or within the firm itself (Hui & Lee, 2000). A focus on perceptions of uncertainty is especially fundamental for strategic management (Priem et al., 2002). This study used a conceptual framework as the research model which relied on theory and research offered by Child (1972), Miles, Snow, and Pfeffer (1974), Hinings, Hickson and Sehneck (1974), Tushman and Romanelli (1983), Miller (1993). That is, the organization was viewed as engaged in dynamic interaction with its environment, with the strategic choices of the dominant coalition substantially influencing the form of this

relationship (Child, 1972). Following Miles, Snow, and Pfeffer (1974), the organization was expected to respond to its environment in a relatively consistent manner over time.

Depending on the organization's response pattern, hotel manager's perceptions of critical environmental contingencies were expected to vary, and those organizational subunits charged with reducing crucial uncertainties were expected to be the most powerful (Hining et al., 1974). In line with manager's perceptions of the locus and extent of environmental uncertainty, certain organizational functions would be regarded as having greater strategic importance than others. Subunits charged with carrying out these strategic functions would thus be expected to be relatively powerful.

Those who are able to cope with uncertainty will adjust their social standing and increase their power in the organization (Tushman & Romanelli, 1983). To the extent that an organizational subunit is powerful, it should be able to command resources in proportion to its power (Pfeffer & Salancik, 1974). Thus, it was expected that a highly valued managerial resource, larger budgetary allocations, and other indicators of the ability to obtain resources would be associated with powerful subunits. Finally, the process by which organizations scan or search their environments for both threats and opportunities should reflect hotel manager's views concerning uncertainty, strategic functions, subunit power, and resource allocation. That is, to preserve the general alignment of the organization with its environment, the dominant coalition is apt to develop a consistent approach to searching the environment for potential threats and opportunities (Cyert &

March, 1963). The conceptual framework used in this study is shown in Figure 1.

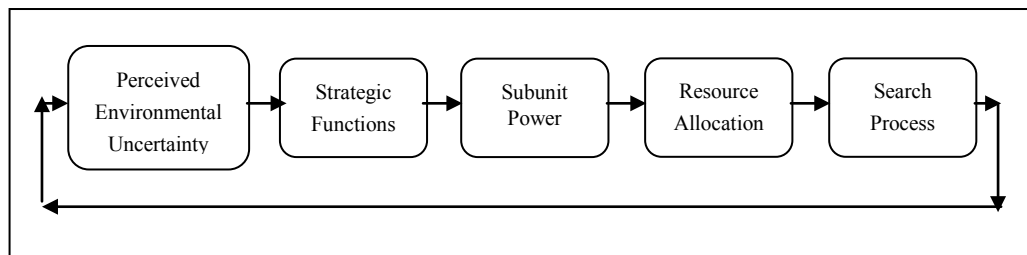


Figure 1. Conceptual framework

The above conceptual framework has been developed more recent theory and research offered by Olsen, (1993), Sawyerr, McGee and Peterson (2003), Doty, Bhattacharya, Wheatley, and Sutcliffe (2006), Olsen et al. (2008).

### 3.2 Hypotheses

On the premise of the foregoing discussion, this study focused on the international brand and the domestic brand hotel managers in Shanghai, China. It is said that though in the same business environment, international and domestic hotel brand differ quite substantially in their clients and profit models (CBRE, 2009). Their hotel operators remain aggressive in developing their business by using different branding and different management strategies because they perceived the different aspects of environmental uncertainties. It is just as what has been argued by Zahra (1987) that firms that follow different strategies will tend to perceive their environments differently. As a result, different organizations may perceive the environment differently though the same

objective environmental attributes (Snow, 1976). And “even for firms that exist in the same sub-industry, and therefore subject to more or less the same environmental factors. There will be significant differences in managerial perceptions of environmental across firms within that industry”(Phua, 2007: 755).

Based on these points, it might be suggested that there is substantial variation of hotel manager’s perceptions of uncertainty between the international brand and domestic brand hotels in Shanghai. As such, hypothesis 1 was examined:

*Hypothesis 1:* Hotel managers’ perceived environmental uncertainty (PEU) is significantly different between international brand hotels and domestic brand hotels in Shanghai.

Folami and Powers (2009) indicated in their research that significantly differences exist in PEU based on management versus non-management personnel, firm size, and functional areas. As this study aims to find the relationship between the managers’ PEU and strategic management, it might be interesting to examine the hypothesis that hotel manager’s perceptions of uncertainty in the organization’s environment would be performed differently by organizational characteristics, strategic function, subunit power, resource allocation, and search process. Hence, the hypothesis 2 can be advanced as follows:

*Hypothesis 2:* Hotel managers’ PEU is significantly different based on strategic management process (aspects on organizational characteristics, strategic functions, subunit power, resource allocation and search process).

The organizational characteristics focused both on ‘the hotel owner’s property characteristics and the hotel major competitors’ property characteristics’, including prospector, defender, reactor and analyzer. Strategic functions here mainly focused on the survey question about ‘the most important function’, chosen from the six functions: finance, human resources, marketing, operations, administration and research& development (R&D). The subunit power means survey choice for ‘organization influencing policy level decision making’ which also selected among the important six functions. Resource allocation is related with the question in the survey that ‘which subunit would get a requested 10% increase in its operating budget if only one request could be granted?’ Search process is mainly about the question of managers’ new information priority (external or internal).

### 3.3 Sample

In this study, a survey questionnaire was drawn for the mainly collection of the research data and the questionnaire was mailed or given to a total of 100 hundred hotel managers in Shanghai, mainly send to the five-star hotels and four-star hotels, especially, contact with two types of hotels, international brand hotels and domestic brand hotels. The survey population was mainly focused on the hotels’ general managers, assistant managers or managers of human resources and marketing. Out of 100 surveys sent to the hotel managers, only 42 respondents returned complete. The summary demographic information is presented in Table 1. The sample consisted of 35(83.3%) male and 7 (16.7%) female. Age distribution reflects a dominance of people in the 36-45(42.9%) age grouping followed by those in 46-55(35.7%), 21-35(16.7%) and 56-68(4.8%). In addition, about

30.0% of respondents have worked in their hotels for 5-10years, and 42.9% respondents owned their undergraduate educational background.

Table 1. Demographic profile of respondents

Characteristics	Frequency	%
Gender		
Male	35	83.3
Female	7	16.7
Age		
21-35	7	16.7
36-45	18	42.9
46-55	15	35.7
56-65	2	4.8
Working period		
1-4 years	5	11.9
5-10 years	13	31.0
11-15years	11	26.2
16-20years	7	16.7
21-25years	4	9.5
26-30years	2	4.8
Educational background		
College	6	14.3
Undergraduate	18	42.9
Graduate(Master)	14	33.3
Graduate(Ph.D)	4	9.5
Hotel type		
International brand	24	57.1
Domestic brand	18	42.9
Star-rated		
5 stars	31	73.8
4 stars	11	26.2
Total	42	100.0

In this study, the ‘perceived environmental uncertainty’ was measured using questionnaire items that corresponded to seven major sectors of the industrial organization’s environment: 1) Suppliers of food & beverage and other hotel operating supplies; 2) Major competitors’ actions; 3) Customers’ demand; 4) The financial /capital markets; 5) Governmental regulations; 6) Labor markets, and; 7) Technological developments. These environmental variables used to assess uncertainty were suggested by previous theories and researches by Lawrence and Lorsch (1967), Miles and Snow (1978), Olsen et al. (1994).

The study conducted the factor analysis to examine the validity of the underlying factor structure of perceived environmental uncertainty. Cronbach’s Alpha ( $\alpha$ ) was used to test the reliability. An internal reliability value of 0.6 or above was considered appropriate. The reliability of coefficients for the seven dimensions of perceived environmental uncertainty shown in Table 2 ranged from .704 to .945 which was considered to be acceptable for the study.

Table 2. Factor and reliability analysis of PEU

Questionnaire item	International brand			Domestic brand			Loading	Alpha
	N	Mean	Std	N	Mean	Std		
1. Raw materials and components								.818

suppliers:							
a. Price changes	24	3.54	.977	18	2.78	.647	.815
b. Quality changes	24	3.29	1.042	18	2.89	.758	.658
c. Design changes	24	3.63	.924	18	3.17	.786	.716
d. Introduction of new materials	24	3.83	.637	18	3.22	.808	.301
2. Competitors' actions:							.890
a. Price changes	24	3.58	.929	18	2.89	1.023	.581
b. Product quality changes	24	3.83	.917	18	3.28	1.018	.776
c. Product design changes	24	3.92	1.100	18	3.39	1.195	.764
3. Customers:							.704
a. Demand for existing products	24	2.67	.702	18	2.50	.786	.533
b. Demand for new products	24	3.67	1.049	18	3.06	1.392	.844
4. Financial/capital market:							.744
a. Interest rate changes							
1. Short-term debt	24	4.08	.974	18	3.89	.758	.671
2. Long-term debt	24	4.50	.933	18	4.22	.732	.848
b. Financial instruments available							
1. Short-term debt	24	4.25	.989	18	3.72	.575	.838
2. Long-term debt	24	5.13	.741	18	4.06	.639	.436
c. Availability of credit							
1. Short-term debt	24	4.21	1.062	18	3.72	.669	.785
2. Long-term debt	24	4.58	1.018	18	4.06	.802	.876
5. Government regulations:							.945
a. Laws or policies on pricing	24	4.13	.992	18	3.17	.618	.748
b. Laws or policies on product standards or quality	24	4.50	1.063	18	3.28	.895	.742
c. Laws or policies regarding financial practices	24	4.54	.977	18	3.39	.698	.756
d. Labor (personnel) laws or policies	24	4.54	1.021	18	3.44	.784	.726
e. Laws or policies affecting marketing and distribution methods	24	4.88	1.076	18	3.61	.916	.689
f. Laws or policies on acceptable accounting procedures	24	4.88	1.035	18	3.50	.786	.583
g. Laws or policies regarding provision of your service	24	4.13	1.154	18	3.17	.857	.735
6. Actions of labor unions:							.829
a. Wages, hours, and working conditions	24	3.79	1.318	18	3.28	.826	.606
b. Union security	24	4.13	1.116	18	3.39	.850	.766
c. Grievance procedures	24	4.29	.999	18	3.50	.924	.826
7. Technologies Development:							.820
a. Computers & communication technologies	24	3.08	.974	18	3.56	.784	.812
b. Expert systems/ decision support systems	24	3.67	1.090	18	3.56	.856	.663
c. Reservation systems	24	3.42	.881	18	3.33	.907	.758
d. Training and development systems	24	3.63	.924	18	3.67	.970	.687
Aggregate mean for all items	24	3.86	.578	18	3.31	.425	.932

The collected data were analyzed through PASW Statistical 18.0 for Windows. The hypotheses were tested by using descriptive statistics, T-test, multivariate analysis of variance (MANOVA).



#### IV. Results

This study utilized T-test for the purpose of analyzing whether the two brand types of hotels' PEU means are different (H1). The results of the environmental uncertainty questionnaire were presented in Table 3. It generally supports the view that managerial perceptions vary from organization to organization in the hotel industry.

In comparison of the PEU, changes in government regulations shows significantly different between the international brand hotels (m=4.51) and the domestic brand hotels (m=3.37). The international brand hotels' managers perceived the more highly unpredictable changes in government regulations than the domestic brand hotels. While in the managerial perceptions of technologies development, the international brand hotels appeared higher degree of their predictability than the domestic ones.

Since the international brand hotels play great important roles in the world hotel industry with their recognizable brand reputation and experience, advanced hotel management and technology, their competitiveness is obviously stronger than the Chinese domestic brand hotels. According to the aggregate means for all items on the environmental uncertainty questionnaire, it shows international brand hotels (m=3.86) present higher environmental uncertainty than the domestic ones (m=3.31).

Variables of raw materials & components suppliers, t-value=2.711, significance level  $p=.010 < 0.05$  indicating there is a significant difference between international brand hotels and domestic brand hotels. And changes in competitors actions ( $p=.046 < 0.05$ ), financial/ capital market ( $p=.004 < 0.05$ ), government regulations ( $p=.000 < 0.05$ ), actions of labor unions ( $p=.018 < 0.05$ ), all above data results indicating that significant differences exists in the above PEU variables between the two hotel brand types. However, variables of customers ( $p=.164 > 0.05$ ) and technologies development ( $p=.737 > 0.05$ ) show no significant difference because their significance level is not below 0.05.

Table 3 shows the total t-value=3.358, significance level  $p=.002 < 0.05$  indicating there is a significant difference, thus the hypothesis I can be said that the hotel managers' perceived environmental uncertainty is significantly different between international brand hotels and domestic brand hotels.

Table 3. T-test of Variables in PEU between the two brand types

PEU Variables	Type	N	Mean	Std	T-test	Sig.*
Raw materials & components suppliers	International	24	3.57	.693	2.711	.010
	Domestic	18	3.01	.615		
Competitors' actions	International	24	3.78	.849	2.062	.046
	Domestic	18	3.19	1.011		
Customers	International	24	3.17	.732	1.418	.164
	Domestic	18	2.78	1.046		
Financial/capital market	International	24	4.46	.614	3.043	.004
	Domestic	18	3.94	.423		
Government regulations	International	24	4.51	.874	4.752	.000
	Domestic	18	3.37	.612		
Actions of labor unions	International	24	4.07	.962	2.473	.018
	Domestic	18	3.39	.760		
Technologies Development	International	24	3.45	.804	-.338	.737
	Domestic	18	3.52	.690		
Total	International	24	3.86	.578	3.358	.002

Domestic 18 3.31 .425

\*sig. two-tailed

Results of hypothesis 2 were arranged in table 4 and summarized as follows.

There is no significant difference exists in PEU based on subunit power, while PEU on price changes and quality changes of raw materials and components suppliers are significantly different by strategic functions; PEU on short-term debt of interest rate changes, wages, hours, and working conditions of labor unions actions are significantly different by resource allocation; and PEU on quality change and introduction of new materials of raw materials and components suppliers, customers demand for existing products, short-term debt of financial instruments available, government regulations of laws or policies on pricing are significantly different by search process.

Table 4. Significant differences of PEU based on strategic management process

Strategic management process	PEU	Sig.
Strategic Functions	Organizational characteristics (Major competitors')	
	quality change	.046
	customer's demand for existing products	.05
	laws or policies on pricing	.028
	labor (personnel) laws or policies	.025
	laws or policies affecting marketing and distribution methods	.038
	laws or policies regarding provision of your service	.006
The most important function	price changes	.001
	quality changes	.004
Subunit Power	Organization influencing policy level decision making	
	no significant difference	—
Resource Allocation	Increase in operating budget	
	short-term debt of interest rate changes	.035
	wages, hours, and working conditions of labor unions actions	.028
Search Process	New information priority (external or internal)	
	quality change	.042
	introduction of new materials	.046
	customers demand for existing products	.006
	short-term debt of financial instruments available	.035
	government regulations of laws or policies on pricing	.014

\*Significant at P-value  $\leq 0.05$

This study tested the hypotheses followed by the conceptual framework (the research model). The significant differences of PEU based on strategic management process indicated that the organization was expected to respond to its environment in a relatively consistent manner. It indicated hotel managers are more specifically consider variable changes on hotel supplies quality, government laws or polices and customer's demand when they make their strategic management.

## V. Conclusion

### 5.1 Conclusion

The purpose of the study was to identify the importance of the hotel industry's business environment, and tried to examine the difference of hotel managers' perceived environmental uncertainty (PEU) between the international brand hotels and domestic brand hotels in Shanghai, as well as discussed the relationship between the PEU and the strategy management processes. In summary, the results of this study suggest that hotel managers' perceived environmental uncertainty is significantly different between international brand hotels and domestic brand hotels in Shanghai. The international brands show highly environmental uncertainty than the domestic ones, especially appeared on changes about government regulations, the financial/capital market, actions of labor unions, competitors' actions, and raw materials and component suppliers.

It was also found that in terms of organizational characteristics, hotel managers' PEU is not significantly different by the hotel owner's property characteristics but significantly different by the hotel major competitors' property characteristics. Moreover, hypotheses tested in this study about PEU and other strategic management processes are summarized as follows.

There is no significant difference exists in PEU based on subunit power, while PEU on price changes and quality changes of raw materials and components suppliers are significantly different by strategic functions; PEU on short-term debt of interest rate changes, wages, hours, and working conditions of labor unions actions are significantly different by resource allocation; and PEU on quality change and introduction of new materials of raw materials and components suppliers, customers demand for existing products, short-term debt of financial instruments available, government regulations of laws or policies on pricing are significantly different by search process.

The results of this study should be of value to hotel managers in China. Results contribute to the strategic management process in a dynamic business environment. On the aspect of the strategic management process that mentioned in this study, most of the managers think marketing, operation and human resources strongly influence policy decision making; they paid more attention to subunits like food & beverage, sales, and domestic markets. However, strategic functions such as finance, administration and research & development are also important functions that could improve the development of hotel operations. In addition, results indicate that when hotel managers made strategic management decisions, they attach importance to perceptions of environmental uncertainties on quality change, laws and policy change, and customer's demand change, while overlooking changes in technological developments as an important side of improving their services. Since technology is an important element of the promotion and development of the hotel business, managers should work harder to keep pace with advanced managerial systems and professional technologies in order to get better performance with the strategies.

## *5.2 Implications*

The results and conclusions present some implications for Chinese hotel managers. Results show that international hotel brands encounter higher environmental uncertainty than the domestic ones. This finding supports former research that indicates international brand hotels perform better than the domestic ones. In order to survive in the competitive business environment, domestic hoteliers should pay attention to environmental uncertainty and try to raise the hotels brand reputation, and continually improve the hotel management strategies. The Chinese government should also provide a more flexible business environment to both the

international hotel investors and the Chinese domestic hoteliers, and make laws and polices more beneficial to the development of China's hotel industry. Aspects on observing the customer's satisfaction and society regulations will be a good advice for hoteliers' better strategic management.

Moreover, with the methodology of examining the relationship with perceived environmental uncertainty of hotel managers and their strategic management process of this study, the hoteliers could compare the current operations performance with others to help them with specific informational strategies, or consulting resources for beneficial management mind. This study also meaningfully remind that with the world wide respect to China's fast development these years, hotel managers should grasp the good opportunities of improving their management in order to make a success in the industry.

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# Knowledge, Risk Perception, and Reading Behavior of Expired Label of Food Product

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## Abstract

Expired label consists of date, month, and year that created by marketer to determine the food safety and the other changes of food such as taste and nutrition. This research analyzed the effect of expired label knowledge and risk perception on the reading behavior of expired label. This research was cross sectional study using survey method that located in Bogor, West Java Indonesia. The sampling method used multistage random sampling with 400 respondents. Level of knowledge, risk perception, and reading behavior of expired label were examined using inferential test as regression tests. Respondents tended to have good knowledge and high risk perception expired on the label, but low of reading expired label. The level of knowledge, risk perception, and reading behavior of expired label of men and women were not different. Knowledge affected significantly on reading behavior of expired label.

**Keywords:** expired label, knowledge, reading behavior, risk perception

## I. Introduction

The development of technology creates a lot of changes, including in food sector. Nowadays, packaged food and beverages are the most frequent consumed since their practical and economical. Food and beverages are the biggest industry that used package that reached 51 percent (Setyahadi, 2013). Law of the republic of Indonesia, Nu. 23 year 1992 concerning health, article 21, clause 2 stated that packaged food and beverages have to provide label about the used materials, compositions or ingredients, and the expired of date, month, and year, and etc. Based on National Agency of Drugs and Foods Control (BPOM), food will be expired if there is unwanted changing from the initial composition. Based on data from the year 2014 there were 1776 (26.1%) food products and beverages that got permission to circulate. The number of food products circulating demanding consumers to be more careful in choosing a product.

The damage of food can be happen because of the physical, chemical, or enzymatic damage (Anonyms, 2013). Some research indicated that in some minimarkets, there were still founded expired foods. This absolutely will disadvantage for the consumers, so that the consumers have to pay more attention on the expired information on the label. Reading information behaviour of label in food product was affected by the relatives, friends, newspaper, and television (Merwe, Bosman, Ellis, Beer, & Mielmann, 2012). Law Nu 8 in year 1999 on consumer protection in article 5 stated that the consumers' responsibility is reading or following the information and user direction or utilization of goods and service for safe and secure. According to Merwe *et al.* (2012) about 69 percent consumers understood about the law of food label.

The marketers should understand about how the knowledge, perception, and behavior of consumers related with expired date label of food product to improve consumers' acceptance. Consumers' knowledge is all the information about any products and services (Sumarwan, 2011). Based on Mensah, Rose and Aidoo (2012), expired label is the most wanted information that been searched by the

consumers when shopping that reached 99.5 percent. Aygen (2012) stated that more than 75 percent respondents have knowledge about the safety and hygiene food.

Ones knowledge and experience can affect perception (Grunet & Wills, 2007). Moreover, consumers' perception level influenced positive and significantly on the behavior (Zheng, Xu & Wang, 2011). Panday and Dixit (2011) also stated that culture and knowledge of consumer may affect the behavior. Negative benefit that was felt by the consumers is known as a risk whether they consume a product or not (Yuliati & Simanjuntak, 2011). Risk perception is related with food safety (Fontes, Heraud & Pinto, 2013). The higher risk that the consumer will get from the product, the perception of product will automatically better (Jeddi & Zaiem, 2010). According to Mahon and Cowan (2004) there are three types of risk perception, such as physical, functional, and psychological risk.

## II. Main Body

### Literature Review

Consumers' knowledge is divided into three types; knowledge on product, knowledge on buying, and knowledge on consuming (Sumarwan, 2011). Based on Peter and Olson (2010), the knowledge of each consumers is different. High educated consumers will get more useful information to assess the product than the one who are not (Cowburn & Stockley, 2004). Mensah et al. (2012) and Prinsloo, Merwe, Bosman and Erasmus (2012) stated that understanding or knowledge level has a significant effect on buying decision and may affects the ability in interpreting the information (Kennedy, Jackson, Cowan, Blair, Dowell, & Bolton, 2005). The research showed a positive relation between knowledge and behavior of consumers (Kennedy *et al.* 2005).

Risk perception is related to consumer assumption about the food safety (Fontes *et al.*, 2013). Based on research by Mahon and Cowan (2010), there are six types or dimensions of risk perception, such as social risk, time risk, psychological risk, performance risk, physical risk, and financial risk. Zhenget al. (2011) stated there are eight kinds of risk perception such as health risk, quality risk, privacy risk, economical risk, time risk, social risk, delivery risk, and after sales risk. According to Menon, Raghubir and Agrawal (2001), health risk always has an aspect on psychological aspect.

Label information helps consumer to determine which food product that safe, healthy, and in a good quality. Most respondents consider the expired date as the most wanted information when buying food packaging since they are more interested to the expired date than other informations (Mensah *et al.* 2012). Zorba and Kaptan (2011) stated that most respondents (89%) dumped the expired food.

Many consumers still ignore expired label on food products such as research conducted by Oksowela (2008) which stated that only 38 percent of consumers who pay attention to the expired date before making the purchase of food products and according to Zahara (2009) 65.6 percent of consumers read the expired label when buying a food product packaging.

### Hypothesis

There were two hypothesis that would be answered in this research, namely :

Hypothesis 1: Knowledge affected significantly on reading behavior of expired label.

Hypothesis 2: Risk perception affected significantly on reading behavior of expired label.

## III. Method

This research used cross sectional study design and survey method. The location took place in Bogor, spesifically in Bogor Agricultural University that was selected purposively. The population was 10.540 undergraduate students in third, fifth, and seventh semester in academic year 2013-2014. Samples were selected by using multistage random sampling, with the size determined by using Slovin formula (Umar, 2005) :

$$n = \frac{N}{1 + N e^2} = \frac{10540}{1 + (10540)(0,05)^2} = 385 \approx 400$$

n = size of samples, N = total of population, e = error (5%).

Knowledge is information possessed by all respondents regarding the expired label. Risk perception is the view of respondents regarding the risk of purchasing food products with expired label. Reading behavior of expired label is the tendency of respondents to read the expired label before buying food products. Knowledge variable was measured by using Guttman scale with two answer options as right and wrong. Risk perception variable was measured by using likert scale with four answer options such as strongly disagree, disagree, agree, and strongly agree. Reading behavior variable was measured by using likert scale with four answer options such as never, rare, often, and

always. All variables were transformed into index 0 to 100. Each variables were categorized into four categories namely very low (score ≤ 25), low (25 < score ≤ 50 ), high (50 < score ≤ 75), and very high (score > 75).

Instrumen for knowledge, risk perception, and behavior adopted and modified from Schiffman and Kanuk (2008) and Sumarwan *et al.* (2012). Knowledge level, risk perception, and reading behavior of expired label were examined using inferential test as regression test. Multiple linear regression test was used for some independent variables and a dependent variable. The model for multiple linear regressions test as follows:

$$Y = \alpha + b_1x_1 + b_2x_2 + \varepsilon$$

Y= reading behavior of expired label (score), α=constants, b=unstandardized coefficient β, x1= knowledge (score), x2= risk perception (score), ε=error.

Reliability test resulted cronbach alpha value for knowledge, risk perception, and reading behavior respectively were 0.625, 0.604, and 0.813. Valid statement question for knowledge variable was 9 items, the perception of risk was 14 items, and reading behaviors was 25 items.

#### IV. Conclusions

##### Results

**Knowledge on Expired Label.** Four of ten respondents were categorized as good in knowledge with average score reached 61.39 out of 100 scale. There was no significant difference (p=0.581) between men and women, even knowledge of men (61.39) was higher than women (61.04).

**Risk Perception on Product that related with Expired Label.** Most respondents (81.2%) were categorized to high risk perception on expired label. There was no significant difference (p=0.617) of risk perception between men and women. The average score of risk perception of men (58.62) was higher than women (57.88). Psychological risk was the risk that most perceived by respondents with the average score as 72.28 and also it was found significant difference (p=0.015) between men and women. Financial risk and time risk were also found significantly difference (respectively p=0.009 and p=0.019) between men and women (see Table 1.).

**Table 1**  
**Descriptive and Statistical Analysis for Risk Perception of Expired Label**

Dimensions of risk perception	Men (n=157)		Women (n=243)		Total (n=400)		Independent t-test (p-value)
	Mean	SD	Mean	SD	Mean	SD	
Function risk	33.83	1.55	31.18	1.16	32.22	1.34	0.092
Physical risk	68.58	1.87	69.59	1.81	69.19	1.83	0.494
Financial risk	46.07	1.70	42.04	1.79	43.62	1.76	0.009**
Social risk	57.04	2.18	56.28	2.23	56.58	2.21	0.788
<b>Psychological risk</b>	<b>70.34</b>	<b>1.50</b>	<b>73.52</b>	<b>1.78</b>	<b>72.28</b>	<b>1.68</b>	<b>0.015*</b>
Time risk	45.78	1.31	43.44	1.09	44.36	1.19	0.019*

\*significant on p<0.05; \*\*significant on p<0.01

**Reading Behavior of Expired Label.** Five of ten respondents were belonged to lack category of reading expired label. There was no significant difference (p=0.618) between men and women, but the score of reading expired label for women (49.98) was higher than men (49.25). As many as 33.2 percent of respondents choosed expired date as third priority that often read and there was significant difference (p=0.038) between men and women. This is not suit with Mensah *et al.* (2012) that the first thing consumer concern before buying food product is expired label since it is used to see the quality, safety, and freshness of product (see Table 2.).

**Table 2**  
**Distribution of Respondents based on Priority of Reading Food Product**

Rank of Priority Level on Reading Label	Label Item	Percentage	Independent t-test ( <i>p-value</i> ) between women and men
1	Brand product	61.2	0.001**
2	Kind of product	39.8	0.459
3	Expired date	33.2	0.038*
4	Halal term	25.5	0.804
5	Serving suggestion	24.3	
6	Compositions/ ingredients	24.5	0.709
7	Nutritional information	22.2	0.048*
8	Net weight	26.5	0.455
9	Manufacturer's address	50.8	0.002**

\*significant on  $p < 0.05$ ; \*\*significant on  $p < 0.01$ ; w: women; m: men

**Factors Affecting Reading Behavior of Expired Label.** Kolmogorof-Smirnov test results showed that almost all independent variables in this study were not normal, due to the significant value less than 0.05, so that the researcher made data modifications by transformed the data into "Ln". Durbin-Watson value was 2.022, means that variable contains no autocorrelation because the Durbin-Watson value closer to the value of two.

The regression model that included knowledge and risk perception variables affected significantly ( $p=0.000$ ) on reading behavior of expired label. The value of *adjusted R square* was 0.066, means that 6.6 percent of examined variables affecting the reading behavior of expired label. Partially, risk perception affected significantly and positively on reading behavior of expired label with the standardized coefficient value as 26.6 percent (Table 3). The regression equation was  $Y=33.137 + 0.004X_1 + 0.280X_2$ .

**Table 3**  
**Factors Affecting Reading Behavior of Expired Label**

Independent Variables	Standardized Coefficient ( $\beta$ )
Knowledge (score)	0.007
Risk perception (score)	<b>0.266**</b>
F-value	15.178
Adj.R <sup>2</sup>	0.066
<i>p-value</i>	0.000**
Durbin-Watson	2.022

Note: \*\*significant on  $p < 0.01$

## Discussion

Result of the study showed that not more than half of respondents understood 'best before' term which means that a product still can be consumed even already passed the date on the package, whereas more than half respondents understood 'use by' term that means a product can not be consumed if it already passed the time on package. Based on the law about food nu 18 year 2012 article 97 clause 3 states that the inclusion of label in and/or on food product has to be printed using Indonesian language and contains at least informations about product, ingredients, net weight, manufacture and the address, *halal* term for those which required, date and code of production, date, month, and year of expired, license number for processed food, and food ingredients.

Respondents' knowledge was categorized as good that was figured form most statements of variables that answered correctly. Most respondents have known the expired date is a sign of food can not be consumed and the consumers have to read the expired label. Most respondents also have known the law on health that stated the expired label "packaged food and beverages have to give a label contains the used materials, ingredients, expired of date, month, and year, and another requirements". Moreover, respondents have known the expired label for the packaged food which is covered and have not contact with the outside. Overall, about 46.8 percent respondents have good knowledge about expired label. This finding was below the research done by Aygen (2012) that more than 75.0 percent respondents have good knowledge about hygiene and food.



Risk perception is related with consumers' assessment about food safety (Fontes et al., 2013). Result of study showed that more than half respondents belonged to high category in perceiving risk of expired label since the respondents agree that they will feel queasy and dizzy if consuming the expired food. Furthermore, respondents were worried if they did not read the expired label first. In the social environment, risk perception was categorized moderate because respondents will feel embarrassed, afraid of being mocked, and excluded if they buy the expired food. Then, of course they will feel loss whenever they buy expired food. High risk perception is often limiting the choices for some very good alternatives to take possibility of choosing the bad choice (Schiffman and Kanuk, 2008).

Risk perception as a choice of product that can harm consumers' ego is the risk that respondent most feel on expired label which reached average score of 72.28 of 100 scale. This is in accordance with research of Menon et al. (2001) that health risk always has psychological aspect. The second risk that respondents most feel was a risk that self felt from the product with average score of 69.19. This findings matched with Mahon and Cowan (2004), that physical and psychological risks are the most felt by consumers, and the research also stated that physical risk is very close related with psychological risk. There was significant difference between men and women for psychological perception due to average score of women was higher, it makes women will more feel the psychological risk than men because women are more concern on food safety than men (Aygen, 2012). There was significant difference between men and women respondents in financial risk. Men will more feel financial risk than women, this finding matched with the research done by Croson and Gneezy (2009) that women ignore more on financial risk than men, and women are less willing on taking financial risk than men (Theodos, Kalish, Mckerman, & Ratchliffe, 2014). Furthermore, there was significant difference between men and women respondents related to time risk. Men more feel time risk than women because women usually consider for a long-term, while men decide to buy something based on urgent decision (Bakhsi, 2013).

Based on result of the study, more than half respondents belonged to the low category on reading behavior of expired label since they think reading is taking time and they are in a rush when shopping. Then, according to the statement item of variable, it was found that the respondents who less concern on reminding others (family and friends) to pay attention on expired label will lack of awareness to complain their rights, and the concern to report the expired food they found in market/store. Sign, Lanumata, Robinson, Travila, Wilton, and Mhurchu (2008) stated that there are some reasons why the consumers do not pay attention on expired label, such as the label are not attracted, no time for reading it, the limitation of consumers to understand the information on food label, and there is no responsibility for the food they eat. Furthermore, most respondents are less understands about their rights and responsibility as consumers, so that it can take effect on the lack of awareness in reading expired label.

There was significant difference between men and women respondents related to how often they care on expired label before buying the product. Women more pay attention than men since they are more sensitive for this issue (Jeddi & Zaiem, 2010). Almost all respondents concerned on expired label on food product. There were still 17.2 percent of consumers who still consume expired food when it still looks in a good condition, and the same findings by Zorba and Kaptan (2011) that there were 8 percent of respondents who still consumed expired food that looked in a good condition.

Consumers' behavior is one of important factors that influence on buying decision (Sumarwan, 2011). In the study, only risk perception affected significantly on reading behavior of expired label. This was in line with Zhang et al., (2011) that consumers' perceptions affected very strong and positively on consumers' behavior. Then, based on Kotler and Keller (2009), there are some factors affected on consumers' behavior, such as psychological factor or perception. Getting information about product label influenced significantly on reading behavior of expired label since the more information they got the more action they will do (Kennedy et al., 2005).

Knowledge did not influence the reading behavior of expired label because only having knowledge about expired label still not enough to motivate the respondents in order to read expired label. Ahmad, Rahman and Rahman (2012) stated that consumers' knowledge did not directly influence their behaviors. On the contrary, Panday and Dixit (2011) stated that consumers' knowledge may affect their behaviors because there are others influenced variables such as reference, lifestyle, motivation, attitude, personality, and self concept (Kotler & Armstrong, 2008; Bakhsi, 2013). There was no significant difference ( $p=0.581$ ) between knowledge of men and women, although the knowledge of men was higher than women. There was no significant difference ( $p=0.617$ ) of risk perception between men and women.

This research still had some limitations that occur when data collection. Characteristics of respondents were homogeneous that caused data centered on a particular trait so that when the data was processed occurred bias. Self-report method that used in this research could not controlled the respondents

when answering the knowledges' question or they tended to seek alternative answers via the internet or ask others.

This research may be used by marketers to determine consumer behavior regarding the expired label. Based on this research there were some consumers who do not understand the difference of labeling expired term "use by" and "best before", so the marketer can use the Indonesian language so that consumers understand more about expired label. For the government, this study can be used as reference that still many consumers who do not understand the law related to the consumer protection. In addition, for the public consumers, they have to be more careful before buying and reading the information label on the packaging of food products as well. Furthermore, this study can be used as additional literature especially in the field of consumer and can be used as a comparison to similar studies.

Respondents tended to have good knowledge and high risk perception expired on the label, but low of reading expired label. Since reading behavior of expired label still low, the government especially the Ministry of Trade, Ministry of Health and the National Agency of Drug and Food Control and the relevant parties such as National Consumer Protection Agency, Consumer Dispute Settlement Body and Consumer Protection Non Governmental Organization including Indonesian Consumer Foundation, are expected to socialize consumers about their rights and obligations as a consumer and to emphasize the importance of reading expired label. Consumers are expected to be smart consumers, who are careful before buying products, enforce obligations as a consumer, and accustom themselves to read the label carefully. Further research can be conducted on a more heterogeneous respondents by adding some other variables, for example lifestyle, motivation, attitude, personality and self-concept.

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# The Influence of Social Network On Narcissistic Tendency of Adolescents

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## Abstract

The existence of social network sites allegedly associated with narcissistic tendencies of adolescents, this is due to the existence of social networking sites raises a person's desire to be able to express themselves as well as self-actualization through its social networking accounts, that it is also influenced by rapid technological advances. Therefore, this study aimed to determine the effect of the use of social networks and socio-economic characteristics of the narcissistic tendencies of adolescents. The research was conducted on 263 adolescents as samples from under graduate, high school and junior high school students in Bogor. The results showed that the most influence factors on the tendency of narcissistic of adolescents was the amount of social network accounts owned. It means that the greater number of social network accounts owned by the adolescents the higher narcissistic tendencies. In addition, the number of siblings also significantly influences the narcissistic tendencies of the adolescents, means that the greater number of siblings in the family, the lower the narcissistic tendencies of adolescents.

**Keywords :** adolescents, narcissistic tendency, number of accounts, social networks

## I. Introduction

The use of social networking, it has become a routine among adolescents. Internet usage in Indonesia has increased from year to year. According to research conducted by Mark Plus Self Insight, a significant growth from 62 million in 2013. The development 2012-74570000 Information and Communication Technologies in the era of globalization is currently experiencing rapid growth, otherwise-can use make the communication media or websites social networks up to date described as obsolete (Nurmandia, Wigati, & Maslichah 2013).

Internet users in Indonesia currently reaches 63 million people. Of that number, 95 percent use the Internet to access social networking. Social networking sites are the most accessed *Facebook* and *Twitter*, Indonesia ranks fourth largest Facebook users after the USA, Brazil, and India (Kemenkominfo 2013).

The use of social networking sites has positive and negative effects depending on their intended use, users tend to have different characteristics. This is because everyone has experience, motives, attitudes and personality types that are relatively different in the use of social networking. Personality is unique and consistent, so it can be used to distinguish between individuals to one another (Widiantari and Herdiyanto 2013). Negative impacts indirectly, including addiction, and disruption of a person's privacy, as well as lower levels of face-to-face interpersonal interaction (Juditha 2011).

Each parent should pay attention to the personality development of children, especially attitudes and behavior that sometimes often up and down and tend to be emotional. Children who grow up to be teenagers need special attention because in this period adolescents are very labile and in a time of self. This is supported by the hypothesis of the research Adi and Yudiati (2009) that there is a negative relationship between self-esteem to the tendency of narcissism on *Friendster* users. The lower the self-esteem, the higher the tendency of narcissism on *Friendster* users, otherwise the higher self-esteem, the lower the tendency of narcissism on *Friendster* users.

The tendency of low communication within the family or the environment can make a person want to receive recognition from others. The existence of social networking sites raises a person's desire to be able to express themselves as well as self-actualization through social networking accounts owned. The use of social networking alleged to have close links with narcissistic tendencies, this is due to excessive self-actualization. For example, the problem of hanging out on the internet which includes indirect communication. If the interlocutor is a new acquaintance, then Internet users do not know exactly about his character, his face, male or female, even honesty. Internet users believe that his new acquaintance was actually there and have a proven identity. Of course that can prove it is a friend of the user itself. Users will never doubt acquainted with the person who has been known by his user (Adi and Yudiati 2009).

The influence of social networking usage patterns of the narcissistic tendencies interesting to study. This study was conducted to analyze the effect of the use of social networking for narcissistic tendencies in adolescents. Specifically, this study aims to determine the effect of sample characteristics, family characteristics, the use of social networking, and narcissistic tendencies in adolescents.

## II. Literatur Iterarnru

### Juvenile

Adolescents defined as developmental period of transition between childhood and adulthood that include biological changes, cognitive, and social-emotional (Santrock 2003). Based on the stage of development Ericson, teens are at the fifth stage, namely, identity *versus* role vagueness (*identity versus identity confusion*). Santrock (2003) suggested that at this stage adolescents faced with the question who they are, and what their future will be. Technological advances in the field of juvenile facilitate communication to access information without limits.

### Social Networking

On most social networking sites, its members do not use the network to meet new people, but rather to communicate with people who have become part of the extension of their social networks (Boyd & Ellison 2007).

Social network is a social structure made up of nodes (individual or organization) that are connected or united by a website. With social networking, besides being able to find people with a variety of characters, can also make friends virtual world, and each send comments via the networking site (Madcoms 2010).

### Narsisistik

Sarwono (2006) suggested that adolescents have a tendency to love themselves or can be called "narcistic". Adolescent indulgence in using social networks that attempt to explain who he is, interest in certain things, and

explain the activities of daily life. Narcissistic personality disorder is a type of disorder that has a characteristic feeling of excessive self-interest and *self-absorption* (Wade & Tavis 2011).

### III. Resaech Method

This study used a *cross-sectional study design*, sample population used in this research were 263 teenagers using *simple random sampling* method with the age range of 13-22 years which consists of 168 students of Bogor Agricultural University, 40 Senior High School, and 55 Junior High School in the city of Bogor Indonesia. Time retrieval of data taken from February to March 2015.

Data collected in the form of primary data and secondary data. Primary data includes individual characteristics (age, gender, pocket money), family characteristics (education parent parental occupation, parental income and family size), the use of social networking (the reason for using social networking accounts owned, frequency, duration, costs, and means for accessing social networks), and the tendency of narcissistic behavior. Primary data were obtained using a questionnaire.

Narcissistic tendencies were measured using a scale based on the narcissistic tendencies DSM-VI and modification of the instrument of Carolina (2013) with 27 questions. Each of these questions using a Likert scale, ranging from 1 to 4 (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree).

The data obtained, processed through the editing process the data (*editing*), coding (*coding*), scoring (*scoring*), data *entry*, the data *cleaning* and data analysis. The data obtained were then processed and analyzed using *Microsoft Excel* and *Statistic Program for Social Science (SPSS)*. Furthermore, the descriptive analysis of the primary data that describes the individual characteristics (age, sex, and pocket money), family characteristics (length of education of parents, parental employment status, parental income and family size), the use of social networking (motif use of social networking, social networking account holdings amount, frequency, duration, cost, and means of the use of social networks), and narcissistic tendencies. The analysis used is multiple linear regression to analyze the influence between the variables in accordance with the purpose of research. Prior to the study, first tested the validity and reliability of the questionnaire. Measurement reliability by using *Cronbach's Alpha* test and measurement validity of the *corrected test inter-item*.

### IV. Result

#### Individual Characteristics

**Education.** The largest proportion of the total education as much as 263 teenagers were students as much as 63.9 per cent, 15.2 per cent of respondents in high school, junior high school and 20.9 percent of respondents.

**Gender.** Sex of respondents classified into two namely men and women. The results showed that the proportion of female respondents was 59.3 percent and 40.7 percent men.

**Age.** The average age of respondents was 19 years with an age range of respondents from 13 to 22 years. The largest proportion of age as much as 26.6 per cent are at the age of 20 years and the proportion of age as much as 5.7 percent was the smallest at the age of 15 years.

**Allowance.** The average allowance received by teenagers outside the transport costs as much as 22 876 dollars in a day with a range of less than 15,000 as much as 17.9 percent, equal to more than 15,000 as much as 68.4 per cent, and more than 30,000 were 13, 7 per cent.

### Family Characteristics

**Large family.** Beradapada respondent families span of 3 people to 10 people. Large families the most is 5 and as much as 39.54 percent of the families most sedikt the number 9 and 10 as much as 1.1 percent.

**Parents' Job.** Father work as much as 97.7 percent of respondents work for a living with this kind of diverse but most are farmers with the amount of 60.8 percent and the least is the vegetable traders as much as 0.76 percent. Then the mother as much as 63.9 percent of respondents did not work for a living but acted as a housewife.

**Parent education.** Education Mr. as much as 59.3 percent studying more than 12 years, as many as 38.4 percent of 7-12-year education, and education as much as 8.4 percent less than 6 years. Mother's education as much as 45.2 percent of respondents' education 7-12 years, a total of 41.1 percent over dari 12 years education, and 13.7 percent less educated than 6 years.

**Family income.** Average income families as much as 6,413,286 rupiah a span of more than 1,500,000 as much as 88.97 percent, 1000000-1500000 as much as 6.46 percent, and as much as 4.56 percent 500000-1000000.

### Use of Social Networking

#### Motif Use of Social Networking

Sheldon (2008) in Desraza (2010) summarizes the six-factor analysis in interpreting the motives of adolescents to use social networking is communication between friends, Table 1 shows that the motive of the most widely used as an excuse by the respondents' use of social networking is communication between friends as much as 84 percent. The use of social networks can maintain friendship with old friends and communicate with friends despite being in different places.

**Table 1. Distribution of respondents based motif use of social networking.**

Motif	n	%
Relationships with friends	212	80.6
Maintaining the relationship	135	51.3
Time passes daily	93	35.4
Communication between friends	221	84.0
Friendship	115	43.7
Seek peace	45	17.1
As Entertainment	212	80.6
Other	34	12.9

#### Ownership Social Networking Accounts

Social networking is one of the web-based service that allows its use presents itself, namely, relating to social networking, and building and maintaining relationships with others. Table 2 shows that social networking accounts most widely held by respondents is facebook, social networking account is the most widely held is facebook as many as 238 respondents (90.5%) followed twitter as much as 225 respondents (85.5%) and fuel as much as 210 respondents (79.8%).

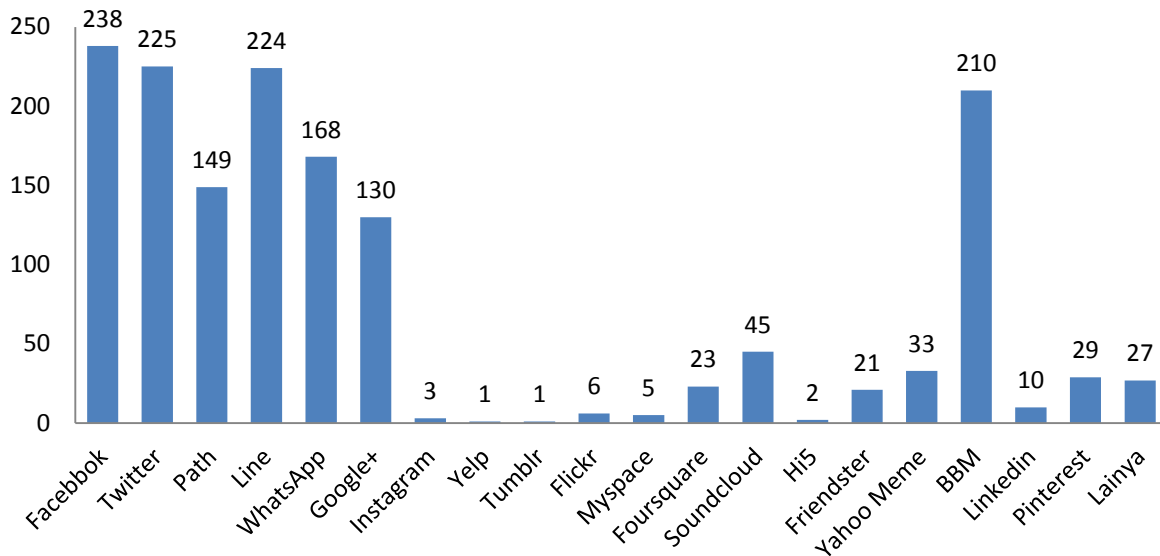


Figure 1 Distribution of respondents by social networking account ownership

The average number of social networking accounts owned by the respondent is 7 account. The number of accounts owned by the respondents is less than 5 account as much as 24.7 percent, 5-10 account as much as 59.3 per cent, and more than 10 accounts as much as 16 percent.

### Frequency and duration of use of Social Networking

Frequency of use of social networking is how often respondents accessing or using social networks in one day (once per day). Table 4 shows that the average frequency of use of social networking as much as 28 times a day. Frequency less than 20 times as much as 65 percent, a frequency of 20-60 times as much as 26.9 percent, and the frequency is more than equal to the 60 as much as 7.9 percent.

The duration of use of social networking is a long time used to access social networking respondents (minutes / once access). The average duration of respondents access social networks is 25 minutes in a single access. Duration less than 30 minutes as much as 67.7 percent, the duration of 30 to 60 minutes as much as 6.5 percent, and the duration is more than equal to the 60 as much as 25.9 percent.

### Devices Accessing Social Networking Sites

Based on the processed data of the most widely used in mobile phones to access social networking is as much as 96 percent, then the laptop or netbook as much as 63.1 percent, and the computer as much as 17.1 percent.

### Total Cost Accessing Social Networking (per month)

The average cost of accessing social networking issued by the respondent in a month is 68 301 rupiah with ranges of less than 50,000 as much as 38.4 percent, over the same range as much as 53.23 percent to 50,000, a span of more than 100,000 as much as 8.37 percent.



### Self-Esteem

Self-esteem is the overall positive or negative evaluations of themselves (Cobb 2011). On the table shows that the average level of *self-esteem* respondents are in the medium *category*. Teenagers who have low *self-esteem* felt useless, hopeless, unable to control themselves, and and feel helpless while having high *self-esteem* feel himself useful, self-control, positive outlook, and feel that diriya can determine the future.

**Table 2. Distribution of respondents by *self-Esteem***

Self Concept	n	%
Low (<33,3%)	0	0
Medium ( 33,4-66,7%)	243	92,4
High (>66,7%)	20	7,6
Total	263	100

### Personality

Gardown W. Allport (in Joseph, 2003) defines personality is a dynamic organization of psychophysical systems that determine individual behavior and thinking typical individual. The intent is dynamic in the sense that the behavior may be changing through learning or experiences, rewards, punishment. The definition refers to the behavioral traits are complex. Consisting of temper, and emotions that are unique from individuals.

**Table 3. Distribution of respondents based on personality**

Personality	n	%
Low (<33,3%)	0	0
Medium ( 33,4-66,7%)	138	52,5
High (>66,7%)	125	47,5
Total	263	100

### Narcissistic tendencies

One of the effects of low *self-esteem* is narcissistic tendency. Narcissistic tendencies is an individual who tends to desire like to ask more admiration than others, but if it is not met then the child makes *self-esteem* become brittle (Adi 2012). The table shows that most respondents (79.8%) are in the medium category for narcissistic

**Table 4 .Distribution of respondents by narcissistic tendencies**

Narcissistic	n	%
Low (<33,3%)	0	0
Medium ( 33,4-66,7%)	210	79,8
High (>66,7%)	53	20,2
Total	263	100

### Relationship between Variable Against Narcissistic Tendency

Results of linear regression analysis are presented in Table 5 shows that only 16.7 percent of the variables that affect narcissistic. While the rest (83.3%) is influenced by other variables not examined in this study. In this study, the factors that affect the narcissistic tendency is the number of siblings and the number of accounts owned. Number of relatives have a significant negative relationship with narcissistic. This means that the greater number of relatives of the respondents, the more narcissistic tendencies in adolescents decrease of 0.94 units. In

addition the number of accounts owned by adolescents showed a significant positive correlation with narcissistic. This means that the more the number of accounts you have, the teenagers tend to be more narcissistic amounted to 0.171 units

**Table 5. Results of regression test factors that influence the narcissistic**

		usia	usaku	pddk bpk	pddk ibu	bekel	uanak	jlmh sdr	pdpt kel	jumakun	frek	dur	biaya	pntotal	kdtot
jlmh sdr	Pearson Correlation	.041	.032	-.118	-.110	.738**	.603**	1	-.085	-.055	.032	-.013	-.046	-.094	-.021
	Sig. (2-tailed)	.513	.604	.056	.075	.000	.000		.168	.371	.611	.833	.451	<b>.129</b>	.39
	N	263	263	263	263	263	263	263	263	263	263	263	263	263	263
Jumakun	Pearson Correlation	.003	.291**	.262**	.364**	-.042	-.056	-.055	-.202**	1	.092	-.126*	.025	.171**	.085
	Sig. (2-tailed)	.967	.000	.000	.000	.500	.362	.371	.00	<b>.005</b>	.138	.041	.690	.005	.167
	N	263	263	263	263	263	263	263	263	263	263	263	263	263	263

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

## V. Discussion

Social networking sites or so-called social networking sites as sites that allow users had registered to interact and communicate through the profile pages that can be customized by the user in question (Haryanto 2009). The use of social networking can be seen through the frequency, duration, number of holdings social networking accounts, and costs incurred to access. The use of social networking can not be separated from the source of the information obtained respondents about social networking sites.

Kring et al (2012) expressed the view that people with narcissistic personality disorder have excessive view of the uniqueness and their ability and focused with great success fantasies. Correlation test results showed that self-concept significantly positively associated with narcissistic tendencies. this is in line with research Adi (2008), that the lower the self-esteem, the higher the tendency of narcissistic on users of social networking is one of myspace.

The use of social networks has no effect on self-esteem. It is presumed that the average adolescent in this study had tingkat self-esteem and who are less mature in through the previous phase of industry versus inferiority. Results of this study are not consistent with research conducted by Steinfeld, Ellison, and Lampe (2008) in a longitudinal study that suggests that Facebook (social networking) can increase the level of self-esteem that is owned by the user by providing a tool that allows users to interact without meeting with other people. Erikson in Megawangi (2007) argued that since the age of 12 years samapai age of 20 years in the past when a child has to feel capable and confident, the next development will be easier for him to search for identity.

Ownership social networking account affect the narcissistic tendency. Some characteristics of narcissistic tendency is to want to show that he was great, believe that he was special and unique, filled with fantasies about power, having excessive need for admiration, exploit interpersonal relationships (APA 2000). Of the

characteristics of the narcissistic tendency someone can show itself through social networking accounts owned. Campbell (2000) argued that narcissistic tendency as a tool to cover up weaknesses and kekuranganya, ie low self-concept. Growth experienced in adolescence, according to Erikson, including at the stage of identity versus identity confusion, this diimana during adolescence will decide who they are, what they are, and where they were (Santrock 2007).

The greater the number of children the more high value for the family. The value of children in the opinion of Arnold and Fawcett (1975) as cited by Jamaluddin Ancok (1985) that the concept or the value of the child has one dimension among parents to obtain the pride and joy of supervising their children grow up and teach them new things, they are proud if it can meet the needs of their children. This compares with one of the causes of narcissistic child is caused by the needs of children who always obeyed parents (Siregar 2003).

## VI. Conclusion

### Knot

The average age of respondents in this study was 19 years and most were female. Self-esteem, personality, and narcissistic tendency among respondents in middle category. In this study, the factors that affect the narcissistic tendency is the number of siblings and the number of accounts owned. Number of relatives have a significant negative relationship with narcissistic. This means that the greater number of relatives of the respondents, the more reduced narcissistic tendencies in adolescents. In addition the number of accounts owned by adolescents showed a significant positive correlation with narcissistic. This means that the more the number of accounts you have, the teenagers tend to be more narcissistic.

### Suggestion

Narcissistic tendency is influenced by the number of siblings and the number of accounts owned by teenagers. The model of this study is only able to explain a little influence on the narcissistic tendencies in adolescents, it is recommended further research to investigate other variables that affect the narcissistic tendencies in adolescents.

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## **Relationship of Rural Agribusiness Development Program (PUAP) on Food Security and Sustainable Wellbeing**

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### **Abstract**

The objectives of this study is to analyze the relationship of Rural Agribusiness Development Program (PUAP) on the Food Security and Sustainable households' wellbeing. The research design is cross-sectional and was carried out in Sekernan district, Muaro Jambi Regency, Jambi Province, Indonesia from July to December 2013. The research sample of 120 households are chosen using purposive and random sampling methods. Descriptive, and Structural Equation Model (SEM) with Linear Structural relationship program (LISREL) models were used for data analyzed. The results show that the implementation of the program PUAP in the study area could increase employment opportunities and income group members, but have not been able to develop microfinance institutions and network partners farmers. The analysis showed that the program PUAP in rural areas significantly positive effect on food security and sustainable households' wellbeing.

**Keywords:** Food Security, Microfinance Institutions, network partners farmers, Rural Agribusiness Development Program, and Sustainable households' wellbeing

# **Analyst Earnings Forecasts and Managerial Ability in Family Firms**

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## **Abstract**

This project contributes to the growing literature on managerial ability by investigating the association between managerial ability and analyst earnings forecasts measured by the analyst followings and analyst earnings forecast accuracy. Prior research indicates that family firms face more severe shareholder-shareholder agency conflicts and have lower earnings informativeness for analysts to forecast their earnings, we thus further investigate whether the relationship differs in case of family firms. Focusing on Taiwan listed firms, we do not find a significant relationship between managerial ability and analyst earnings forecasts. However, further evidence shows that analyst accuracy is positively associated with managerial ability in family firms while analyst coverage is not. The evidence implies that higher managerial ability in family firms could improve analysts forecasting performance but not attract more analyst followings.

**Keywords:** managerial ability; analyst forecast; family firms

## Intentionality and Dynamic Networking of Incubation

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### Abstract

The present paper proposes a Satellite model for explaining the intentionality and dynamics elements of incubators' inter-organizational interactions with heterogeneous stakeholders. We argue that the intentional and often subjective interpretations of an incubator may lead to variety in its outward interactive behaviors to, and its responses to inward requests from, different or even the same types of stakeholders. In turn, such micro varieties lead to the network dynamics of the whole incubation system. Theoretical and practical implications are discussed.

**Keywords:** Dynamic Network, Intentionality, Incubation

## **The Incubation-Networking Research: A Systematic Review from 2002~2014**

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### **Abstract**

This article systematically sorted and analyzed studies on the topic of incubation and social or organizational networking from the period during 2002 to 2014. The applications and evolutions of Network theories were discovered. The results also suggested on the comparison of such stream of studies conducted in the United States and European countries. Ultimately, four directions for future research were discussed. First, the development of the incubation networking theory. Second, to comprehend the process of incubation. Third, to improve and to increase the quantity of longitudinal design. Finally, to utilized multi-level theorization and design.

**Keywords:** Incubation, Networking, Social Capital



# Corporate Social Disclosure's Role on Board Governance's Effect to Financial Performance

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## Abstract

This research aims to examine the role of corporate social disclosure in mediating the effect of board governance on the company's financial performance. Board governance is often associated with firm performance (Bhagat& Black, 1999), but in addition the company also must pay attention to its sustainability. High performance can be achieved by optimizing the three dimensions, i.e. profit, planet and people (Elkinton, 1997). Board governance as a supervisor and advisor board (Bapepam, 2007) can optimize the TBL three dimensions, so that the existence of board governance can affect the corporate social responsibility (measured by CSD), and companies financial performance.

The samples taken were 90 companies per year, making observations as many as 360 companies. Hypothesis testing is done by using ordinary least square. Multiple regression analysis used to test the mediating effect of corporate social disclosure in BG influence on the financial performance using path analysis.

Research shows that corporate social disclosure is able to mediate the effect of board governance that include the size of the Board of Commissioners, the number of board meetings, and educational background of economic and business commissioners on the financial performance of the company.

**Keyword:** board governance, corporate social disclosure, financial performance

## I. Introduction

Board governance (thereafter abbreviated with BG) plays a central part in company organ because it is in charge of supervising both generally and particularly and of advising the board of directors (Bapepam, 2007). BG is one of corporate governance mechanisms (Lukviarman, 2007). BG is usually called board of commissioners in Indonesia. The main job of BG concerns decision making (Zahra & Pearce, 1989), healthy discussion in corporation issues (Anderson and Anthony, 1988), and organizing the implementation of program (Dulewicz, et al., 1995).

The research on BG in Indonesia is interesting to study, because the BG's position in Indonesian companies is different from that in other countries particularly in European countries. The position of BG in Indonesia is not as strong as that in European countries, because in Indonesia it has no authority of hiring and

firing the board of directors like in Europe, so that the board of directors should not be accountable to BG (Sabeni, 2005). The position of BG in Indonesia is in parallel with that of board of directors. This difference of BG position will confirm the BG's role in affecting the best practice corporate governance in Indonesia.

The corporate financial performance is determined by demographic characteristic of BG, because BG serves as the driver of board of direction's performance (Pfeffer, 1983). BG does not affect the financial performance as found by Johnson et al. (1996). Normally, BG is not a direct determinant of company performance (Kesner and Johnson, 1990). The structure of BG does not affect the corporate performance because of too many intervention processes to expect a strong direct relationship (Finkelstein and Hambrick, 1996). Considering the previous studies, it could be concluded that BG could affect the company performance, either directly or indirectly.

On the other hand, the company should always take its sustainability into account, among others, by improving the financial performance. The high performance could be achieved by optimizing three dimensions: profit, planet, and people (Elkington, 1997). This concept is so-called Triple Bottom Lines (TBL). *Profit* means that the company should get profit; *planet* means that company should pay attention to environment problem, and *people* means that company should consider social aspect (Elkington, 1997). BG as supervisor and advisor of board of directors (Bapepam, 2007) could optimize the three dimensions of TBL, so that the existence of BG could affect the corporate social responsibility (measured with CSD), and corporate financial performance (measured with ROA and ROE). For that reason, this research would examine the relationship of those three variables: BG, CSD, and corporate financial performance.

The existence of BG is expected to supervise, to encourage and to direct the board of directors to maintain the stakeholders' rights so that the company's sustainability can be maintained and in turn can improve the company performance. Previous studies proves that BG affects positively the CSD (Chen and Jaggi (2000); Haniffa and Cooke (2005); Cheng and Courtenay (2006); Rouf (2011); Khan et al., (2012); Htay, et al., (2012).

The company uncaring of social aspect is not only adverse but also harmful to its own sustainability (Elkinton, 1997). For example, sweeping action concerning the Indonesian laborers' rights has made 292 companies stop operating, 6 out of which are foreign companies (Viva.co.id, 2012). This practical phenomenon is also supported by the findings of previous studies showing that CSD affects positively the company performance (Schadewitz and Niskala, 2010; Choi et al., 2010; Suhardjanto and Nugraheni, 2012).

Considering the elaboration above, it can be concluded that BG can affect either directly (Pfeffer, 1973) or indirectly the performance (Kesner and Johnson, 1990; Finkelstein and Hambrick, 1996; Ong and Wan, 2001). BG affects positively CSD (Chen and Jaggi (2000); Haniffa and Cooke (2005); Cheng and Courtenay (2006); Rouf (2011); Khan et al., (2012); Htay et al., (2012)), then CSD affects positively the performance (Schadewitz and Niskala, 2010; Choi et al., 2010; Suhardjanto and Nugraheni (2012). For that reasons, this current research hypothesizes that CSD can mediate the effect of BG on corporate financial performance.

This study is different from the previous ones, because it connects three aspects: BG, social aspect (CSD), and corporate financial performance. The research contributes theoretically in that BG could encourage the company to hold CSR in the attempt of balancing many parties' interest in order to maintain the company's sustainability and to improve the financial performance.

## II. Theoretical Foundation and Hypothesis Development

## **2.1. The effect of Board Governance on financial Performance**

### **2.1.1. The effect of Commissioner Board Size on Financial Performance**

As Collier and Gregory suggested (1999), the larger the number of Commissioner Board's member, the easier is the controlling of Chief Executive Officer and the more effective is the management activity monitoring.

The larger size of Commissioner Board can control the management more appropriately and thereby improve the financial and nonfinancial performances of company. The increased size of Commissioner Board serves as the strategy of improving the decision making capability (Pearce and Zahra, 1992; Dalton, Daily, Jhonson and Ellstrand, 1999). The larger size of Commissioner Board was more effective than the small one (Abeyssekera, 2008). Considering this argument, the following hypothesis can be proposed:

Hypothesis 1a: The size of Commissioner Board affects positively the financial performance.

### **2.1.2. The effect of Independent Commissioner Board Proportion on Financial Performance**

The proportion of independent commissioner affects the firm performance (Chan and Li, 2008). The proportion of Independent commissioner board is related positively to the firm performance measured using Tobin's q (Shil et al., 2011). The proportion of commissioner board can improve the firm value (Bueno, 2004).

Based on the finding of previous researches, it can be concluded that the higher the proportion of independent commissioner in the company, the more likely is the commissioner board can undertake its supervisory and advisory duties to the board of directors effectively and give value-added to the company. For that reason, the hypothesis is proposed as follows:

Hypothesis 1b: The proportion of Commissioner Board affects positively the financial performance.

### **2.1.3. The effect of Commissioner Board Meeting Number on Financial Performance**

The company's board of commissioner more frequently holding meeting will improve capacity for recommending and monitoring the management effectively, and then improve the corporate financial performance (Ntim and Osei, 2011). Considering the elaboration above, the hypothesis is proposed as follows:

Hypothesis 1c: The number of Commissioner Board's meeting affects positively the financial performance.

### **2.1.4. The effect of the members of Commissioner Board's education background on financial performance**

Wallace and Cooke (1990) stated that the members of Commissioner Board with economic and business education background make broader disclosure to improve the company's image and management credibility.

Hypothesis 1d: Economic and business education background of the members of Commissioner Board affects positively the financial performance.

### **2.1.5. The effect of the members of Commissioner Board's international experience on financial performance**

Carpenter, Sanders, W. G., and Gregersen, 2001 and Sambharya, 1996 underlined the idea of international job experience widely recognized as the vital asset and as potential source of competitive advantages (Spreitzer,

McCall, and Mahoney, 1997). International experience can be considered as prerequisite of promotion to higher level of managerial position.

Gantenbin and Volote (2011) found that Board Governance international experience affects positively the company performance.

Hypothesis 1e: The member of Commissioner Board's international experience affects positively the financial performance.

### **2.1.6. The effect of the members of Commissioner Board's experience as President Director on Financial Performance**

Corner and Kinicki (1997) showed the importance of experience because it will improve knowledge and leads to the improved performance of company. Board of Commissioner with experience in a variety of position will give the company some advantages because of science and insight they have (Anderson, Ronald, Reeb, Upadhyay, and Zhao (2009). A literature review shows that there is a support for the premise that Board of Commissioner deriving from direction brings and exerts positive effect on the various aspects of company performance, either through recommendation, decision making, goodwill, and connectivity/relationship with outside world and in different situation (Jenkins, 2012). Considering the elaboration above, the research hypothesis is proposed as follows:

Hypothesis 1f: The member of Commissioner Board's experience as President Director affects positively the Financial Performance.

### **2.1.7. The member of Commissioner Board's industrial knowledge on firm performance**

Faleye, Rani and Udi(2114) found that industrial skill relates positively to the company value. Industrial knowledge is relevant to the function of board governance as supervisory council (Meyerinck et al., 2012). It is because with industrial experience they have in-depth understanding on risk and opportunity of such the industry. Industrial knowledge also makes the board of governance undertaking the supervision more effectively. Based on the elaboration above, the hypothesis of research is formulated as follows:

Hypothesis 1g: The member of Commissioner Board's industrial knowledge affects positively the Financial Performance.

## **2.2. The effect of Board Governance on Corporate Social Disclosure**

### **2.2.1. Size of Commissioner Board and Corporate Social Disclosure**

Commissioner board is one of important elements in supervising the company operation in order to be managed correctly by their manager. The larger the number of commissioner board's members, the more easily is the Chief Executive Officer (CEO) to be controlled and the more effectively is the management activity to be controlled (Coller and Gregory (1999). The larger size of commissioner board is more effective than the smaller one (Abeysekera, 2008). Considering the elaboration and research findings above, the hypothesis is formulated as follows:

Hypothesis 2a: The *size* of Commissioner Board affects positively the CSD.

### **2.2.2. Proportion of independent commissioner and Corporate Social Disclosure**

The commissioners coming from outside company can improve the effectiveness of commissioner board in undertaking its main function, supervising the company management by the management (Fama and Jansen, 1983). Ho and Wong (2001) proved that the proportion of independent commissioners affects positively the corporate social and environmental disclosure. Based on the elaboration and research finding above, the hypothesis is formulated as follows:

Hypothesis 2b: The proportion of Independent Commissioners affects positively the CSD.

### **2.2.3. The effect of Commissioner Board meeting on Corporate Social Disclosure**

The Commissioner Board meeting is a means of Commissioner Board to make evaluation and to give input to the management. Evaluation is intended to identify the problem likely arising in the company operation or operational reporting. The problem arising needs attention and special follow-up or is not decided in this meeting. Suhardjanto and Anggitarani (2010) stated that the more frequently the Commissioner Board meeting is held, the more quickly the discrepancy of company implementation is detected.

The characterizing CSD practice becomes the demand the Commissioner Board should consider. Inadequate CSD practice likely results and can lead to sensitivity impacting negatively on the company. The more frequently the meeting is held, the more quickly the error is detected in order to be corrected by improving CSD practice. Based on the elaboration and research finding above, the hypothesis of research is formulated as follows:

Hypothesis 2c: The number of Commissioner Board meetings affects positively the CSD.

### **2.2.4. The effect of the members of Commissioner Board's education background on Corporate Social Disclosure**

Suhardjanto and Anggitarani (2010) mentioned that the Commissioner Boards with economic and business education background have better knowledge and ability in managing the company. The Board of Commissioner with economic and business education background understands better the importance of CSD practice to a company's success. Based on the elaboration and research finding above, the hypothesis of research is formulated as follows:

Hypothesis 2d: The education background of Commissioner Board members affects positively the CSD.

### **2.2.5. The Effect of Commissioner Board Member's International Experience on Corporate Social Disclosure**

The competency of Commissioner Board can be represented in three ways: education background, experience, and network (Reeb and Zhao, 2009) that can be obtained through Commissioner Board's international experience. The members of Commissioner Board's international experience can make them understanding the international environment better (Horner, 2006) that is also important to international company activity (Giannetti, Liao and Yu, 2011). The understanding of international environment from international experience can improve the Commissioner Board's understanding on the importance of CSD in business that can encourage the improvement of CSD practice by management. Considering the elaboration and research finding above, the hypothesis of research is formulated as follows:

Hypothesis 2e: The international experience of Commissioner Board members affects positively the CSD.

### **2.2.6. The effect of the members of Commissioner Board's experience as President Director on Corporate Social Disclosure**

Reeb and Zhao (2009); Chemmanur, Paeglis, and Simonyan (2009) stated that experience as president director to the commissioner board is the determinant of improved company value and CSD practice quality. The commissioner with experience as president director is expected to have ability of encouraging the improvement of CSD practice. Considering the elaboration and research finding above, the hypothesis of research is formulated as follows:

Hypothesis 2f: The experience of Commissioner Board members as President Director affects positively the CSD.

### **2.2.7. The effect of the members of Commissioner Board's industrial experience on Corporate Social Disclosure**

Faleye, Rani and Udi(2014) found that industrial skill is positively related to firm value. It is because with industrial experience they have in-depth understanding on risk and opportunity of such the industry. Industrial knowledge also makes the board of governance undertaking the supervision more effectively. Based on the elaboration above, the hypothesis of research is formulated as follows:

Hypothesis 2g: The member of Commissioner Board's industrial knowledge affects positively the CSD.

## **2.3. The effect of Corporate social disclosure on Financial Performance**

Several previous studies found that CSD affects positively the firm value (Schadewitz and Niskala (2010); Choi, Kwak and Choe (2010); Suhardjanto and Nugraheni (2010); Jo and Harjoto(2011). The result of researches showed that market will respond to CSD positively, leading to the larger firm value. On the contrary, the company uncaring of social aspect is not only adverse but also harmful to its own sustainability (Elkinton, 1997). For example, sweeping action concerning the Indonesian laborers' rights has made 292 companies stop operating, 6 out of which are foreign companies (Viva.co.id, 2012).

This research expects that CSD, in addition to affecting the firm value, also affects the financial performance. For that reason, the third hypothesis of research can be stated as follows:

H3: CSD affects positively the company's financial performance.

## **2.4. Corporate Social Disclosure as mediating variable of the effect of Board Governance on the financial performance**

The studies on board structure and company performance assume that the corporate financial performance is predominantly determined by the characteristic of board. The process the Commissioner Board undertakes as the driver of board of directors' performance should not be understood but inferred from the demographic characteristics of commissioner board.

The process the Commissioner Board undertakes generally refers to the board's decision making activity (Zahra & Pearce, 1989). Anderson and Anthony (1988) noted that the process the Commissioner Board undertakes is relevant to discussion on corporation issues and problems, so that the decision will be reached and supported. The activity process of Commissioner Board is symbolized as organization and implementation that should be conducted in order to achieve the objective of the board (Dulewicz, et al., 1995). CSD practice is a

part of Commissioner Board's activity process in encouraging and motivating the management to implement the transparency principle of CG.

The effect of board structure and financial performance is likely nearly absent at all, or if any, it is insignificant (Johnson, Harian, and Ellstrand, 1996). Kesner and Johnson (1990) suggested that normally, the board is not the direct determinant of firm performance. The reason of why the structure of board does not affect universally the firm performance is too many intervention processes to expect the strong direct relationship (Finkelstein and Hambrick, 1996). Another reason is that the board is not involved in daily decision making (Ong and Wan 2001).

Goh et al. (2008) put voluntary disclosure as the mediator for the effect of independent commissioner board proportion on company liquidity. They found that voluntary disclosure level mediated significantly the effect of independent commissioner board proportion on company liquidity. Observing closely, we can take a lesson that the effect of 'concept' in this case, CG with transparency concept using 'independent commissioner' proxy with 'result', in this case liquidity, is mediated by 'the implementation of concept' in this case voluntary disclosure.

Considering the finding of research above and CSD as one of company's activity processes involving board governance as its implementation controller, CSD can serve as mediating variable for the effect of board governance on firm performance. Board governance in this research included size of commissioner board, proportion of independent commissioner board, number of Commissioner Board meeting, education background of Commissioner Board members, international experience of Commissioner Board member, the members of Commissioner Board's experience as President Director, and industrial knowledge of Commissioner Board members.

For that reason, the hypothesis assuming that CSD as mediating variable of the effect of board governance on the financial performance is formulated as follows:

- Hypothesis 4a: The effect of size of commissioner board on financial performance is mediated by CSD.
- Hypothesis 4b: The effect of the proportion of independent commissioner board on financial performance is mediated by CSD.
- Hypothesis 4c: The effect of the number of commissioner board meeting on financial performance is mediated by CSD.
- Hypothesis 4d: The effect of the education background of commissioner board members on financial performance is mediated by CSD.
- Hypothesis 4e: The effect of the International Experience of commissioner board members on financial performance is mediated by CSD.
- Hypothesis 4f: The effect of the experience of commissioner board members as president director on financial performance is mediated by CSD.
- Hypothesis 4g: The effect of the industrial experience of commissioner board members on financial performance is mediated by CSD.

### III. Method

This research employed secondary data originating from annual report of companies enlisted in Indonesian Stock Exchange (ISE). The sampling technique used was judgment random sampling method. Through

such the technique, 95 companies were obtained as the sample with 4-year period of observation, so that there were 380 observations. Having processed the data, there were 20 data outliers before the analysis was conducted. Data outliers were excluded from the analysis process. The data analyzed consisted of 360 observations on the companies.

The population of research consisted of the companies enlisted in Indonesian Stock Exchange (ISE) in 2009, 2010, 2011, 2012, and 2013. Banking and financial service companies were excluded from the sample because they had social environmental characteristic very different from the manufacturing ones and other industries. For that reason, the sample of research consisted of manufacturing and non-financial service companies. The detail can be seen in the table 1 below.

**Table 1**  
**Sample of research**

	<b>Note</b>		<b>Total</b>
1	Total non-finance companies enlisted continuously in 2009 to 2012	4 x 256	1024
2	Companies publishing annual report incompletely in 2009 to 2012 continuously	4 x 163	652
3	Companies presenting annual report completely in 2009 to 2012	4 x 193	682
4	Sample observed in 2009-2012.	4 x 95	380
3	Data outliers excluded from the analysis in 2009-2012	4 x 5	(20)
4	So, the complete data observations analyzable in 2009-2012.	4 x 90	360
<b>Total observations</b>			<b>360</b>

The dependent variable of current research was financial performance. Financial performance is proxied using return on assets (ROA) and additional analysis, return on equity (ROE). The independent variable was board of governance. The existence of Board governance was viewed from several dimensions: size, proportion, independent commissioner board, number of meeting, education background, international experience, job experience, and industrial experience of commissioner board. The mediating variable of research was CSD, proxied with CSD index. This research employed firm size and industry type as control variables.

The hypothesis testing was conducted using a multiple regression ordinary least square test. All of hypothesis tests had passing through classical assumption, multicollinearity, heteroscedasticity, autocorrelation and normality tests. Technique of analysis used for examining the CSD as the mediating variable for the effect of BG on financial performance was path analysis.

#### **IV. Result of Hypothesis and Discussion**

##### **4.1. The result of test on the effect of Board Governance on Financial Performance**

The result of test on the effect of BG on financial performance shows that only size and industrial experience of commissioner board affect positively the performance, as measured with ROA. It means that the larger the number of commissioner board and the more the industrial knowledge the commissioner board has, the better is the financial performance of company. Considering this result, it can be concluded that hypotheses



1a and 1 g were supported, but hypotheses 1b, 1c, 1d, 1e and 1f were not supported. The size of commissioner board affects positively the performance, as measured with ROE. It means that the larger the number of commissioner board, the better is the firm performance.

**Table 2**  
**Result of Teston the effect of**  
**Board Governance on Financial Performance (ROA)**

Variable	Exp Sign	Coefficient of regression	$t_{stat}$	Sig	
SIZEDK	+	.010	4.357	.000	***
PROPK	+	-.148	-3.865	.000	***
MEETDK	+	.000	-.572	.568	
PDDDK	+	-.018	-1.265	.207	
INTEXPDK	+	.016	1.098	.273	
JOBEXPDK	+	-.047	-3.879	.000	***
INDEXPDK	+	.031	2.093	.037	**
ASSETS		.000	-1.228	.220	
TIPE		-.008	-.788	.431	
$F_{stat}$		8.232			
Significance		0.000			
$R^2$		0.425			
Adjusted $R^2$		0.159			

\*\*\*) = significant at 0.01, \*\*) = significantat 0.05, \*) = significantat 0.1, N= 346.

**Table 4**  
**Result of Teston the effect of**  
**Board Governance on Financial Performance (ROE)**

Variable	Exp Sign	Coefficient of regression	$t_{stat}$	Sig	
SIZEDK	+	.115	2.017	.044	**
PROPK	+	-.074	-1.366	.173	
MEETDK	+	-.024	-.458	.647	
PDDDK	+	-.125	-2.244	.025	**
INTEXPDK	+	.062	.922	.357	
JOBEXPDK	+	-.146	-2.749	.006	***
INDEXPDK	+	.152	2.848	.005	***
ASSETS		-.012	-.234	.815	
TIPE		-.007	-.108	.914	
$F_{stat}$		3.515			

Significance	0.000
$R^2$	0.086
<i>Adjusted R<sup>2</sup></i>	0.062

\*\*\*) = significant at 0.01, \*\*) = significant at 0.05, \*) = significant at 0.1, N= 342

This result is consistent with the logic of agency theory stating that the larger the size of commissioner board, the higher is the firm performance. Why? Because the responsibility of management is improved due to the better control of commissioner board, and the management (agent) increasingly motivated to maximize the shareholder (principal)'s interest. In addition, more commissioner boards could help the management in making strategic business decision.

This result was consistent with Guo and Yeh's (2009) study finding that there was a positive relationship between the size of commissioner board and firm value. It is likely because of the larger the number of commissioner board, the more is the good ideas applicable to directing and to controlling the company management.

The proportion of independent commissioner board does not affect the corporate financial performance. This finding is inconsistent with the logic of agency theory stating that the more the independent commissioners, the better is the firm performance. This logic of agency theory is based on an argument that the existence of independent party, in this case the independent commissioner, can bridge the principal's and the agent's interest thereby can minimize the conflict of interest. At least conflict can make work become more focused and improve the performance.

This finding of research does not support Chan and Li (2008) and Guo and Yeh (2009) suggesting that the existence of independent commissioners improved the firm performance. This finding is in line with Bhagat and Black (2000), Chaocharia and Grinstein (2007) stating that there was no effect of the increased proportion of Independent Commissioner Board on the improved firm performance.

The result of research showed that education background of commissioner board members does not affect the performance. It means that the larger number of Commissioner Board members with business and economic education background do not affect the corporate financial performance. This finding does not support the logic of agency theory stating that the larger number of Commissioner Board members with business and economic education background have more good alternatives and can encourage the company's profitability compared with those with no business and economic education background.

This finding indicates that the members of Commissioner Board with business and economic education background contribute less than other members to encouraging the improvement of corporate financial performance.

The international experience of Commissioner Board members does not affect the corporate financial performance. This finding is inconsistent with the logic of agency theory stating that the longer international experience can give the management the input concerning a variety of information and alternative creative solutions and wider network, thereby impacting on the improved financial performance of company.

The experience of Commissioner Board members as President Director does not affect positively the corporate financial performance. This finding is inconsistent with the logic of agency theory stating that the longer and the more experience of Commissioner Board members as President Director can give valuable and

effective input to the management in order to get creative solution, thereby impacting on the improved financial performance of company.

The industrial knowledge of Commissioner Board members affects positively the corporate financial performance. This finding is in line with the logic of agency theory arguing that the longer and the more experience of Commissioner Board members with the same industry can give valuable and effective input and thereby impact on the improved financial performance of company.

#### 4.2. The effect of Board Governance on corporate Social Disclosure

The result of test on the effect of board governance on CSD shows that size, number of meetings, and business education background of commissioners affect positively the CSD level. Such the result keeps consistent after being controlled by firm size and industry type variables. It means that hypotheses 2a, 2c, and 2d stating that size, number of meetings, and business and financial education background of commissioner board affect positively the CSD level, are supported.

The proportion of independent commissioner board affects negatively CSD. International and industrial experiences of commissioner boards do not affect CSD, and job experience of commissioner board affect negatively CSD. It means that hypotheses 2b, 2e, 2f, and 2g, stating that the proportion of independent commissioner board, international, job, and industrial experiences of commissioner board affect positively CSD, are not supported.

**Table 5**  
**Result of test on the effect of Board Governance on CSD**

Variable	Exp Sign	Coefficient of regression	$t_{stat}$	Sig
SIZEDK	+	.011	3.078	.002 ***
PROPK	+	-.114	-1.954	.051 **
MEETDK	+	.008	5.838	.000 ***
PDDDK	+	.037	1.676	.095 *
INTEPK	+	.020	1.060	.290
JOBPK	+	-.038	-2.056	.041 **
INTEPK	+	.001	.030	.976
$F_{stat}$		8.534		
Significance		0.000		
$R^2$		0.388		
Adjusted $R^2$		0.133		

\*\*\* = significant at 0.01, \*\* = significant at 0.05, \* = significant at 0.1, N = 346

**Table 6**  
**Result of test on the effect of Board Governance on CSD**

Variable	Exp Sign	Coefficient of regression	$t_{stat}$	Sig
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SIZEDK	+	.009	2.761	.006	***
PROPK	+	-.062	-1.092	.276	
MEETDK	+	.007	5.593	.000	***
PDDDK	+	.052	2.419	.016	**
INTEPK	+	-.042	-2.002	.046	**
JOBPK	+	-.045	-2.522	.012	***
INDEPK	+	-.001	-.027	.979	
ASSETS		.000	-.278	.781	
TIPE		-.085	-5.411	.000	***
<i>F<sub>stat</sub></i>		10.444			
Significance		0.000			
<i>R<sup>2</sup></i>		0.468			
<i>Adjusted R<sup>2</sup></i>		0.198			

\*\*\* = significant at 0,01, \*\* = significant at 0,05, \* = significant 0,1, N = 346

The result shows that the larger the size of commissioner board, the better is the CSD. This finding supports the logic of agency theory stating that the larger the size of commissioner board, the more easily is the Chief Executive Officer (CEO) to be controlled and the more effectively is the management activity to be controlled (Coller and Gregory (1999). It is consistent with Sembiring (2005) finding that the size of commissioner board affected positively and significantly the CSD. This result of research indicates that the board of commissioners is caring of CSD practice. The larger size of commissioner board encourages the management to hold CSD practice.

The proportion of independent commissioner board affects negatively the CSD. This result is in contrast to the argumentation of agency theory. Independent commissioner is the means of supervising the management behavior in order to improve voluntarily information disclosure in the company's annual report (Rosentstein and Wyatt, 1990). The commissioners coming from outside company can improve the effectiveness of commissioner board in undertaking its main function, supervising the organization of company by the management (Fama and Jansen, 1983).

This finding is different from Ho and Wong (2001) in Hongkong proving that the proportion of independent commissioner affected positively the corporate social and environmental disclosure. In addition, this finding is also different from Andayani et al (2008) proving that the proportion of independent commissioner board affects positively the social and environmental disclosure.

The international experience of Commissioner Board members does not affect positively the CSD. It indicates that the International Experience of Commissioner Board members motivates less usefully the management to make broader social disclosure.

#### 4.3. The effect of CSD on Financial Performance

The result of test on the effect of CSD on financial performance shows that CSD affects positively significantly the financial performance, either ROA or ROE. It means that the higher the Corporate Social

Responsibility disclosure, the higher is the corporate financial performance. It is consistent with the prediction, so that the third hypothesis stating that CSD affects positively the corporate financial performance is supported.

**Table 7**  
**Result of Test on the Effect of CSD on Financial Performance (ROA)**

Variable	Exp Sign	Coefficient of regression	$t_{stat}$	Sig
CSD	+	.070	1.988	.048 **
$F_{stat}$		3.950		
Significance		0.048**		
$R^2$		0.107		
Adjusted $R^2$		0.008		

\*\*\*) = significant = 0.01, \*\*) = significant = 0.05, \*) = significant = 0.1, N=346

**Table 8**  
**Result of Test on the Effect of CSD on Financial Performance (ROE)**

Variable	Exp Sign	Coefficient of regression	$t_{stat}$	Sig
CSD	+	.109	1.941	.053 **
$F_{stat}$		3.769		
Significance		0.053**		
$R^2$		0.105		
Adjusted $R^2$		0.008		

\*\*\*) = significant = 0.01, \*\*) = significant = 0.05, \*) = significant = 0.1, N=346

This result supports that of some previous studies finding that CSD was correlated positively with firm performance (Hackson and Milne, 1996; Suhardjanto and Nugraheni, 2010; and Servaes and Tamayo, 2013).

#### 4.4. The effect of Board Governance and CSD on Financial Performance

The result of test on the effect of BG on financial performance, having been controlled by mediating variable of CSD, can be seen in the table 9. Considering the table, it can be found that size of commissioner board, job experience, international experience, and industrial experience of commissioner board affect positively the financial performance, as measured with ROA. This result is different from additional analysis measuring the financial performance using ROE.

The proportion of independent commissioner board affects negatively the financial performance. It means that the higher the proportion of independent commissioner board, the lower is the financial performance. This is inconsistent with the prediction. Number of meetings and education background of commissioner board do not affect the financial performance, while job experience of commissioner board affects negatively the financial performance.

**Table 9**

**Result of Test on the Effect of Board Governance and CSD on Financial Performance (ROA)**

Variable	Exp Sign	Coefficient of Regression	$t_{tat}$	Sig	
SIZEDK	+	.010	4.188	.000	***
PROPDK	+	-.152	-4.006	.000	***
MEETDK	+	-.001	-.651	.515	
PDDDK	+	-.021	-1.467	.143	
INTEXPDK	+	.022	1.863	.063	*
JOBEXPDK	+	-.045	-3.723	.000	***
INDEXPDK	+	.032	2.132	.034	**
CSD	+	.016	.456	.648	
$F_{stat}$		8.992			
Significance		0.000			
$R^2$		0.419			
Adjusted $R^2$		0.156			

\*\*\*) = significant at 0.01, \*\*) = significant at 0.05, \*) = significant at 0.1, N= 346.

**Table 10**

**Result of Test on the Effect of Board Governance and CSD on Financial Performance (ROE)**

Variable	Exp Sign	Coefficient of Regression	$t_{tat}$	Sig	
CSD		.091	1.462	.145	
SIZEDK	+	.014	3.457	.001	***
PROPDK	+	-.118	-1.809	.071	*
MEETDK	+	-.001	-1.000	.318	
PDDDK	+	-.010	-.398	.691	
INTEXPDK	+	.009	.372	.710	
JOBEXPDK	+	-.022	-1.058	.291	
INDEXPDK	+	.008	.332	.740	
ASSETS		.000	-.907	.365	
TIPE		.021	1.117	.265	
$F_{stat}$		2.451			
Significance		0.008			
$R^2$		0.263			
Adjusted $R^2$		0.041			

\*\*\*) = significant at 0.01, \*\*) = sig, N=342

#### 4.5. The role of CSD in the effect of board governance on financial performance

The size of commissioner board affects positively and significantly the financial performance (ROA and ROE), either controlled by CSD or not as a mediating variable. The size of commissioner board affects and positively significantly the CSD, and then CSD affects positively the financial performance (tables 7 and 8). It means that the size of commissioner board can affect the financial performance, either directly or indirectly. It indicates that CSD variable mediates the effect of the size of commissioner board on corporate financial performance. The mediation is semi-mediation in nature, because the size of commissioner board also affects directly the financial performance. It means that hypothesis 4a stating that CSD mediates the effect of size of commissioner board on financial performance is supported.

Number of commissioner board meetings affects positively and significantly the CSD level, and then CSD affects the financial performance. It means that the larger the number of meetings, the higher is the CSD level. Then, the higher the CSD level, the better is the firm performance. It is consistent with hypothesis 4c stating that CSD mediates the effect of board activity measured with number of meetings on the corporate financial performance.

Education background of commissioner board affects positively and significantly the CSD; and CSD affects the financial performance. It means that the more the number of commissioner board members with economic and business education, the higher is the awareness of making CSD. Then CSD will impact on the improved financial performance of company. This result is consistent with hypothesis 4d stating that CSD mediates the effect of education background of commissioner board on the corporate financial performance.

The proportion of independent commissioner and industrial knowledge of commissioner independent variables do not affect CSD, thus they cannot mediate the effect of board governance on financial performance. The variables of international and job experiences of commissioner board affect negatively the CSD. It is in contradiction with prediction, so that hypotheses 4e and 4f stating that international and job experiences of commissioner board mediate the effect of BG on the performance are not supported.

CSD serves to mediate the effect of size, number of meetings, and economic and business education background of commissioner board on the financial performance, consistent with the finding of previous studies (Goh *et al.*, 2008; Johnson, Harian and Ellstrand, 1996; Kesner and Johnson, 1990). The voluntary disclosure level mediates significantly the effect of independent commissioner board proportion on the company liquidity (Goh *et al.*, 2008). The effect of board structure and financial performance is likely nearly absent at all, or if any, it is insignificant (Johnson, Harian, and Ellstrand, 1996). Normally the board is not the direct determinant of firm performance (Kesner and Johnson, 1990). Finkelstein and Hambrick (1996) noted that the reason of why the structure of board does not affect universally the firm performance is too many intervention processes to expect the strong direct relationship. Another reason is that the board is not involved in daily decision making (Ong and Wan 2001).

## V. Conclusion, Limitation and Recommendation

### 5.1. Conclusion

The result of test on the direct effect of BG on financial performance shows that only size and industrial experience of commissioner board affect positively the performance, as measured with ROA, while others variables (number of meetings, education background, job experience and international knowledge) do not affect directly the financial performance.

The result of test on the effect of board governance on CSD shows that size, number of meetings, and business education background of commissioner board affect positively the CSD level. Such the result keeps consistent after being controlled by firm size and industry type variables. The proportion of independent commissioner board affects negatively the CSD. International and industrial experience does not affect CSD, and job experience of commissioner board affects negatively the CSD.

Result of test on the effect of CSD on the financial performance shows that CSD affects positively and significantly the financial performance (ROA and ROE). It means that the higher the disclosure level of corporate social responsibility, the higher is the corporate financial performance.

The result of research shows that CSD can mediate the effect of BG proxied by size, number of meeting, and economic and business education background on the corporate financial performance.

## 5.2. Limitation and recommendation

1. This study did not take into account the linearity and endogeneity issues. For that reason, further study can take these issues into account.
2. From a variety of hypothesis testing conducted, only some hypotheses are evident. Some results could not support the agency theory. For that reason, further research is recommended to use other theories than agency theory.

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# The Role of Earnings Management in Mediating The Impact of Ownership Concentration On Financial Performance of Banks

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## Abstract

This research examines the role of earnings management in mediating the impact of ownership concentration on financial performance of banks in Indonesia. The sample consists of all national banks in Indonesia between 2006 and 2011. The total sample for six years is 711 observations. Financial performance is measured by using return on assets and return on equity. The concentration of ownership is measured by using the largest percentage of stock ownership. Earnings management is measured by using bank specific accruals and real activity. Control variables consist of the type of family control, non family control, and the characteristics of the company.

The results show that ownership concentration has a negative effect on financial performance and real earnings management (REM) through cash flow from operations (RCFO), and has a positive effect on REM through discretionary expenses (RDE). Accruals earnings management (AEM) and RCFO have positive effects on performance, whereas REM through interest and discretionary expenses has a negative effect on performance. RDE and RCFO mediate the effect of ownership concentration on financial performance. This research indicates that controlling shareholders use real earnings management resulting lower financial performance. Among the controlling shareholders, controlling by family and private institutions control have smaller financial performance, but greater REM than the government and foreign one.

**Keywords:** Ownership concentration, earnings management, and financial performance.

## I. Introduction

The relation between the ownership concentration and firm performance has gotten the broad attention in accountancy and financial literature, but as far as today it is fail to reach consensus about the relation's nature. The positive relation of the ownership concentration toward performance was found by Berle and Means at the beginning (1932). Since that moment, a number of writers also found the positive relation between the ownership concentration and performance (Shleifer and Vishny, 1986; Alimehmeti and Paletta, 2012, and Krivogorsky and Grudnitski, 2010). On the contrary, the negative relation between the ownership concentration and performance was found among others by Al-Khouri (2013) and Mule, Mukras, and Oginda (2013).

According to *entrenchment* hypothesis, the ownership concentration has the potential to create agency conflicts because the ownership pattern like this gives the strong incentives for the controller shareholders to expropriate the company resources by sacrificing the importances of the minority shareholders of the non controllers (La Porta, De-silanes, Shleifer, and Vishny, 2002; Villalonga and Amit, 2006; Nam and Nam, 2004). The ownership concentration and great control have the potential to cause expropriation risks of the controller shareholders to the other *shareholder*. The high control right concentration of the controller shareholders was related to the high expropriation risks, low performance and firm value (Claessens, Djankov, and Lang (2000); La Porta, De-silanes, Shleifer, and Vishny (2002); and Zhu and Ma (2009). Therefore, the first hypothesis (H1) of this research can be stated as follows: “the ownership concentration has a negative effect on the financial performance”.

The phenomenon of expropriation indication of the controller shareholders also happened to the various bank cases in Indonesia, such as liquidation cases of 16 banks and 7 banks that were frozen in their operations in the economy crisis of 1997, the bankruptcy case of Bank Summa in 1992, bankruptcy of the bank global in 2004, and Bank Century’s case in 2008. This phenomenon was also supported by the previous researches’ results that found the expropriation indication of the controller shareholders included in Indonesia (Claessens, Djankov, Fan, and Lang, 1999; Faccio and Lang, 2002; Haw, Hu, Hwang, and Wu, 2004; Siregar, 2008; and Achmad, Rusmin, Neilson, and Tower, 2009), that influenced negatively performance (Achmad et al., 2009).

The expropriation of the controller shareholders can be hidden and done by using the earnings management, both through the accrual discretionary (Healy, 1985; Crocker and Slemrod, 2007) and by various real activities (Thomas. Herrmann, and Inoue, 2004; Graham, Harvey, and Rajgopal, 2005; Roychowdhury, 2006, Saanoun, Riahi, and Arab, 2013; Luo, Wan, and Cai, 2012; Johnson, La Porta, Lopez-de-Silanes, and Shleifer, 2000; Bhaumik and Gregoriou, 2010; Jian and Wong 2010). The earnings management was done to maximize the own importance of the agents, that could bring consequences toward the decrease of the firm performance (Kang and Kim, 2011, and Graham et al., 2005). Maximizing the agents’ importances themselves is identical with the the private benefits’ taking (*expropriation*) that is done by the controller owners. Based on the expropriation indication phenomenon of the controller shareholders above, this research assumes that the high ownership concentration of the controller shareholders was related with the high expropriation risks (through earnings management) and the low firm performance. Hypothesis 2 of this research is as follows:

H2: Ownership concentration has a positive effect on earnings management.

The earnings management can make the investment decision becomes less optimal (McNichols and Stubben, 2008). Besides, the company that manipulate earnings significantly will increase the capital cost (Dechow *et al.*, 1996). Abbas and Rizwan (2007) found that the arual discretionary was related negatively with the company value. The commercial bank that do the earnings management faces the negative market response if they intentionally report the earnings decrease in the good time and report the relatively high earnings in the bad time. The real activities manipulation can decrease the firm value because the effect of improving the today period earnings can influence negatively the next period cash flow (Roychowdhury, 2006). For example, the operation activities manipulation such as R&D, production, and capital investment cause the deviation from the normal business practice and have the potential of decreasing the performance in the next years (Roychowdhury, 2006). Based on these researches, it means that the earnings management can influence negatively the company performance. Therefore hypothesis 3 of this research is:

H3: Earnings management has a negative effect on financial performance

This research is important because: first, the expropriation indication of the controller shareholders was found many times in the various bank cases in Indonesia. Second, the previous research reviewed many times the earnings management based on the real activities in non bank institution (Roychowdhury, 2006; Seybert, 2010; Zang, 2012), but the bank institution did not get the attention yet. The previous research also did not relate the earnings management with the expropriation possibility of the controller shareholders in banks. Third, this research reviews the three variables' relation those are the ownership concentration, earnings management, and performance in one research model, those are the earnings management role in mediating the ownership concentration influence toward performance. This research needs to be done because the earnings management as the mediation variable is hoped to be able to give the more precise view about the expropriation level done by the controller owners.

This research has the purpose to give the empirical evidence that the earnings management has the role to mediate the ownership concentration influence toward the financial performance of the bank industry in Indonesia. This research finding gives contribution as follows: 1) adding the literature about the measurement of the real earnings management in banks that did not get attention yet in the previous researches, 2) giving the empirical evidence of the expropriation indication of the controller shareholders toward the company's *resources* through the real earnings management that influences negatively the financial performance, and 3) providing the evidence of the role of the real earnings management in mediating the ownership concentration influence toward the banks' financial performance in Indonesia. 4) providing the evidence of the indication of the real earnings management that is used as the tool to cover and/or do the taking of the private benefits by the controller shareholders.

## II. Research Methods

This research was done on the bank industry in Indonesia. The research time period was in 2006 until 2011. The research data was the secondary data gotten from Direktori Perbankan Indonesia (BI, 2006-2012). The data about the ownership and control were got from Indonesia Bank. This research variables consist of the financial performance, ownership concentration, earnings management, family/non family control and bank characteristics. The financial performance was measured using *return on assets* (ROA), added with the other indicator, that was *return on equity* (ROE). The ownership concentration was measured using the biggest share percentage held by the shareholders. The earnings management was measured using the earnings management based on the real activities and accrual of the bank specific model (Beaver & Engel, 1996 and Rahmawati, 2006). The earnings management based on the real activities used Roychowdhury (2006) model that were adjusted with the bank business. The real earnings management consisted of the earnings management through the interest expenses, discretionary expenses, and cash flow from operation activities.

This research control variable is the bank characteristics and family/non family control. The bank characteristics consisted of bank size was measured with *log total assets (size)*, age, branch office amount, sub branch office amount, cash office amount, and ATM amount. The family control was measured using *dummy* variable of family control (D\_Fam) and non family control (D\_Nfam). The non family control consisted of: the control by Government of Indonesia (D\_Gov), control by private institution (D\_Priv), and control by foreigners (D\_Forg).

### The Real Earnings Management

The earnings management based on the real activities is derived from Roychowdhury (2006) model, adapted with the bank business. The regression model used to get the real earnings management is as follows:

$$CFO_{it}/A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(IR_{it}/A_{it-1}) + \beta_2(\Delta IR_{it}/A_{it-1}) + \epsilon_{it} \quad (1)$$

$$IE_{it}/A_{it-1} = \alpha_0 + \alpha_1(1/A_{it-1}) + \beta_1(IR_{it}/A_{it-1}) + \beta_2(\Delta IR_{it}/A_{it-1}) + \beta_3(\Delta IR_{it-1}/A_{it-1}) + \epsilon_{it} \quad (2)$$

$$DE_{it}/A_{it-1} = \frac{\epsilon_{it}}{\alpha_0 + \alpha_1(1/A_{it-1}) + \beta(IR_{it-1}/A_{it-1}) + \epsilon_{it}} \quad (3)$$

Note:

$CFO_{it}/A_{it-1}$	:	Cash flow from operations in the year t, which are scaled with total assets in the year t-1.
$\alpha_1(1/A_{it-1})$	:	Intercept scaled with total assets in the year t-1 thus operating cash flow does not have value 0 when trading and lag trading value 0.
$IR_{it}/A_{it-1}$	:	Interest revenues of bank i, in year t scaled with total assets in the year t-1.
$\Delta IR_{it}/A_{it-1}$	:	Interest revenue of bank i, in year t minus interest revenue of bank i in the year t-1 scaled with total assets in year t-1.
$IE_{it}/A_{t-1}$	:	Interest expenses of bank i in the year t scaled with total assets of bank i in the year t-1.
$DE_{it}/A_{it-1}$	:	Discretionary expenses of bank i in the year t scaled with total assets of bank i in the year t-1.
$\alpha_0$	:	constant.
$\epsilon_{it}$	:	error term of bank i in the year t.

The regression estimation in the equation 1, 2, and 3 above was done inter company (*cross-sectional*) per year, as done by Roychowdhury (2006) and Zang (2012). The abnormal CFO, IE, and DE were the actual CFO, IE, and DE reduced by the normal CFO, IE, and DE. Because the normal CFO, IE, and DE could not be *observed* directly so it was estimated by using the regression of the actual CFO, IE, and DE toward the explanation variable in the equity 1, 2, and 3. Thus, the abnormal CFO, IE, and DE were the *error terms* of the equity 1, 2, and 3 above. The abnormal CFO, IE, and DE were the proxy of the *real earnings management* (REM).

### The Bank Specific Accrual Earnings Management

The earnings management based on accrual uses the bank specific accrual model (Beaver and Engel, 1996; and Rahmawati, 2006). Discretionary Accruals is the proxy of earnings management. Total accruals (TA), non discretionary accruals (NDA) and discretionary accrual (DA) was counted with the equation as follows:

$$TA_{it} = NDA_{it} + DA_{it} \quad (4)$$

$$TA_{it} = [\alpha_0 + \alpha_1 CO_{it} + \alpha_2 LOAN_{it} + \alpha_3 NPA_{it} + \alpha_4 \Delta NPA_{it+1}] + \epsilon_{it} \quad (5)$$

$$DA_{it} = TA_{it} - [\alpha_0 + \alpha_1 CO_{it} + \alpha_2 LOAN_{it} + \alpha_3 NPA_{it} + \alpha_4 \Delta NPA_{it+1}]. \quad (6)$$

Note:

$TA_{it}$	:	Total accruals of bank i in year t
$NDA_{it}$	:	<i>Non Discretionary accruals</i> of bank i in year t.
$DA_{it}$	:	Discretionary accruals of bank i in year t.
$CO_{it}$	:	<i>loan net charge – offs</i>
$LOAN$	:	<i>Loans outstanding</i>
$NPA$	:	<i>Non performing assets</i>
$\Delta NPA$	:	Difference of <i>non performing assets</i> t+1 from <i>non performing assets</i> t.

All variables were deflated by *gross book value* (GBV), that is the equity book value plus the loan financial loss reserve (gross value). So, *discretionary accruals* can also be gotten from *error term* (divergence /residual value) of the equation model 5 above, or  $DA_{it} = TA_{it} - NDA_{it}$ . This research used discretionary and non discretionary component of loan losses provision because this account was the main accrual in bank industry (Beaver and Engel, 1996).

### Data Analysis Techniques

The analysis technique to test hypothesis 1, 2, and 3 used the regression technique of the panel data because the data used were the composite of *time series* and *cross section* data. The regression estimation of the panel data used was the estimation of *generally least squares* (GLS).

### The Research Equation Model

The equation model to test hypothesis 2 is:

$$AEM_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 Largest_{it} + \beta_3 Size_{it} + \beta_4 Age_{it} + \beta_5 Branch_{it} + \beta_6 SubBran_{it} + \beta_7 Cash_{it} + \beta_8 ATM_{it} + \epsilon_{it} \quad (P1a)$$

$$RCFO_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 D\_Fam_{it} + \beta_3 Size_{it} + \beta_4 Age_{it} + \beta_5 Branch_{it} + \beta_6 SubBran_{it} + \beta_7 Cash_{it} + \beta_8 ATM_{it} + \epsilon_{it} \quad (P1b)$$

$$RIE_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 D\_Fam_{it} + \beta_3 Size_{it} + \beta_4 Age_{it} + \beta_5 Branch_{it} + \beta_6 SubBran_{it} + \beta_7 Cash_{it} + \beta_8 ATM_{it} + \epsilon_{it} \quad (P1c)$$

$$RDE_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 D\_Fam_{it} + \beta_3 Size_{it} + \beta_4 Age_{it} + \beta_5 Branch_{it} + \beta_6 SubBran_{it} + \beta_7 Cash_{it} + \beta_8 ATM_{it} + \epsilon_{it} \quad (P1d)$$

The equation model to test hypothesis 1 and 3 is:

$$ROA_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 AEM_{it} + \beta_3 D\_Fam_{it} + \beta_4 Size_{it} + \beta_5 Age_{it} + \beta_6 Branch_{it} + \beta_7 SubBran_{it} + \beta_8 Cash_{it} + \beta_9 ATM_{it} + \epsilon_{it} \quad (P2.1a)$$

$$ROE_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 AEM_{it} + \beta_3 D\_Fam_{it} + \beta_4 Size_{it} + \beta_5 Age_{it} + \beta_6 Branch_{it} + \beta_7 SubBran_{it} + \beta_8 Cash_{it} + \beta_9 ATM_{it} + \epsilon_{it} \quad (P2.1b)$$

$$ROA_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 RCFO_{it} + \beta_3 RIE_{it} + \beta_4 RDE_{it} + \beta_5 D\_Fam_{it} + \beta_6 Size_{it} + \beta_7 Age_{it} + \beta_8 Branch_{it} + \beta_9 SubBran_{it} + \beta_{10} Cash_{it} + \beta_{11} ATM_{it} + \epsilon_{it} \quad (P2.1c)$$

$$ROE_{it} = \alpha + \beta_1 OwnC_{it} + \beta_2 RCFO_{it} + \beta_3 RIE_{it} + \beta_4 RDE_{it} + \beta_5 D\_Fam_{it} + \beta_6 Size_{it} + \beta_7 Age_{it} + \beta_8 Branch_{it} + \beta_9 SubBran_{it} + \beta_{10} Cash_{it} + \beta_{11} ATM_{it} + \epsilon_{it} \quad (P2.1d)$$

#### Note:

- ROA<sub>it</sub> : Return on assets of bank i in the year t.  
 ROE<sub>it</sub> : Return on equity of bank i in the year t.  
 OwnC<sub>it</sub> : Ownership concentration of bank i in the year t  
 D\_Fam<sub>it</sub> : Dummy variabel - Family control of bank i in the year t..  
 Size<sub>it</sub> : Size of bank i in the year t..  
 Age<sub>it</sub> : Age of bank i in the year t.  
 Branch<sub>it</sub> : Amount of Branch of bank i in the year t.  
 SubBran<sub>it</sub> : Amount of sub branch of bank i in the year t.  
 Cash<sub>it</sub> : Amount of cash office of bank i in the year t.  
 ATM<sub>it</sub> : Amount of automatic teller machine of bank i in the year t.  
 ε<sub>it</sub> : Error term of bank i in the year t.  
 AEM<sub>it</sub> : Accruals earnings management of bank i in the year t  
 RCFO<sub>it</sub> : Real earnings management through cash flow from operation of bank i in the year t.  
 RIE<sub>it</sub> : Real earnings management through interest expenses of bank i in the year t  
 RDE<sub>it</sub> : Real earnings management through discretionary expenses of bank i in the year t.

### III. Research Results and Discussion

#### The Effect of Ownership Concentration on Financial Performance

The testing result of hypothesis 1 shows that the ownership concentration has a negative effect on the performance, both performance measured by ROA and ROE. The higher the ownership concentration of a bank, the lower the performance. That result was controlled by various bank's characteristics such as size, age, branch office amount, sub branch amount, cash office amount, and ATM amount. This result indicates that the ownership concentration *robustly* influences negatively the bank financial performance. This result was in consistent with the prediction.

The testing result of the control variable of the family control influence toward performance showed that the family control performance was lower significantly rather than the non family if the performance was measured with ROA and lower if measured with ROE. The bank performance controlled by family was not different from private institution, but lower significantly compared with the government and foreign control. The bank size influences positively and

significantly the performance. It means the bigger the bank size, the higher the financial performance. The other bank characteristics such as age, branch office amount, sub branch office amount, cash office amount, and ATM did not inconsistently influence the performance measured with ROA and ROE.

This result provide the strong indication that expropriation of the control shareholders toward non control shareholders had happened. This research result is consistent with the findings of Claessens *et al.* (2000); La Porta *et al.* (2002); and Zhu and Ma (2009) that show that the highness of the voice right concentration of the control shareholders influences the highness of expropriation risk, and the lowness of performance and company value.

Why do the ownership concentration influence negatively the performance? It was possible that it was caused by the expropriation done by the control shareholders toward bank company *resources* in Indonesia. The previous research result showed that eighty five percent (85%) company in Indonesia were affiliated at least with one company group (Lukviarman, 2004), and they used the transaction of the affiliation inter company to expropriate the company *resources* (Nam & Nam, 2004).

### The Effect of Ownership Concentration on Earnings Management

Result shows that the ownership concentration do not effect on *accruals earnings management* (AEM). This result indicates that the controller shareholders were not interested in using AEM to conceal and/or expropriate. The ownership concentration has a negative effect on RCFO. It means the more concentrated the ownership, the lower the *abnormal* of the cash flow from operation. This result indicates that the controller owners used the real earnings management that could decrease the cash flow from operation, so the abnormal of the cash flow from operation became be low.

Table 1  
The Effect of Ownership Concentration on Earnings Management

Keterangan	AEM		RCFO		RIE		RDE	
	1	2	3	4	5	6	7	8
C	-0.87*** (-2.66)	-0.79*** (-2.69)	0.23 (-0.56)	0.43 (1.27)	-2.74*** (-5.08)	-1.32** (-2.12)	-0.41** (-1.81)	-0.60 (-0.93)
OwnC	0.01 (-0.18)	-0.04 (-0.80)	-0.15*** (-3.14)	-0.17*** (-2.71)	-0.07 (-0.82)	-0.02 (-0.17)	0.30*** (-4.09)	0.27*** (-3.31)
D_Fam	-0.10*** (-3.41)		-0.13*** (-3.374)		0.24*** (-4.61)		0.16*** (-4.15)	
D_Priv		0.00 (-0.01)		0.03 (-0.62)		-0.18** (-2.24)		0.00 (-0.02)
D_Gov		0.17*** (-4.48)		0.14*** (-3.50)		-0.97*** (-11.37)		-0.27** (-6.65)
D_Forg		0.15*** (-3.32)		0.18*** (-3.67)		-0.70*** (-7.45)		0.00 (-0.01)
Size	0.06** (-2.22)	0.05** (-2.10)	-0.01 (-0.27)	-0.04 (-1.33)	0.23*** (-5.28)	0.15*** (-3.00)	0.00 (-0.09)	0.03 (-0.64)
Age	0.00** (-2.12)	0.00 (-1.19)	0.00 (-1.49)	0.00*** (-2.63)	0.00** (-2.46)	0.00** (-2.18)	0.00 (-0.59)	0.00 (-0.84)
Branch	0.00** (-2.44)	0.00* (-1.84)	0.00 (-0.03)	0.00 (-0.05)	0.00*** (-6.09)	0.00 (-1.03)	0.00** (-2.47)	0.00*** (-3.31)
Subbranch	0.00 (-1.58)	0.00 (-0.63)	0.00 (-0.94)	0.00 (-0.16)	0.00 (-0.97)	0.00* (-1.68)	0.00 (-0.52)	0.00 (-0.06)
Cash Office	0.00 (-0.37)	0.00 (-0.36)	0.00 (-1.47)	0.00 (-0.98)	0.00*** (-6.93)	0.00 (-1.05)	0.00 (-1.26)	0.00 (-0.32)
ATM	0.00 (-1.45)	0.00 (-1.03)	0.00 (-0.59)	0.00 (-0.52)	0.00*** (-4.19)	0.00** (-2.51)	0.00 (-1.04)	0.00** (-2.28)
Adj. R <sup>2</sup>	0.10	0.11	0.04	0.06	0.58	0.21	0.06	0.02
F-statistic	10.47	10.14	4.95	5.68	8.85	20.29	6.73	2.53
Prob(F-stat.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1 percent levels, respectively.  
The number of observations is 711.  
t values pointed out in parenthesis.

The ownership concentration does not effect on RIE. This result indicates that the controller shareholders did not use the interest expenses to conceal and expropriate. The ownership concentration has a positive effect on real earnings management through discretionary expense (RDE). This result means the higher the ownership concentration level, the greater the abnormal discretionary cost. AEM and RCFO banks controlled by family are not different significantly from private institution. AEM and RCFO banks controlled by family and private institution were lower significantly than AEM and RCFO foreign and government banks. The company size do not influence RCFO. RIE and RDE controlled by family were higher significantly than the non family. The bank characteristics such as age, branch, sub branches, cash office amount and ATM do not effect consistently to RIE and RDE, so it can not be concluded that the characteristics effect robustly to RIE and RDE.

Why doesn't the ownership concentration effect on AEM, but effect on *real earnings management* (REM) through RDE and RCFO?. This result may be proceed from the controller shareholders did not use AEM but used REM to conceal expropriation. AEM has a characteristic *reverse (offset)* inter period is not enough to conceal or expropriate permanently and continuously. Some previous researches shows that the expropriation of the controller shareholders in Indonesia was done permanently and continuously (Haw *et al.*, 2004; Siregar, 2008; and Achmad *et al.*, 2009).

The expropriation done permanently and continuously through the real earnings management will influence directly in increasing the operational expenses in the form of discretionary expenses. Thus, the *abnormal* discretionary cost that becomes RDE proxy will be high, furthermore will influence directly to decrease the cash flow from operation. Therefore the greater the ownership concentration, the lower the *abnormal* cash flow from operation (RCFO).

### The Effect of Earnings Management on Financial Performance

The testing result of hypothesis 3 shows that AEM has a positive effect on financial performance both measured with ROA and ROE. It means that the greater AEM, the greater ROA and ROE. Both results are on the contrary with hypothesis 3 that states that the AEM has a negative effect on financial performance, thus hypothesis 3 is rejected.

Table 2  
The Effect of Ownership Concentration and Earnings Management On performance

Keterangan	Variabel Dependen							
	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE
C	-0.01 (-1.01)	-0.48*** (-2.96)	0.00 (-0.07)	-0.49*** (-6.21)	-0.04*** (-3.21)	-0.59*** (-3.62)	-0.02 (-1.41)	-0.56*** (-3.34)
OwnC	-0.01*** (-3.16)	-0.11*** (-4.15)	-0.01*** (-3.13)	-0.07*** (-5.62)	-0.01*** (-3.45)	-0.11*** (-4.05)	-0.01*** (-2.85)	-0.10*** (-3.29)
AEM	0.00*** (-4.08)	0.02** (-2.22)						
RCFO			0.00*** (-3.75)	0.01*** (-2.65)				
RIE					-0.01*** (-13.26)	-0.05*** (-4.212)		
RDE							0.00*** (-3.48)	-0.03** (-2.42)
D_Fam	-0.01*** (-6.71)	-0.07*** (-3.07)	0.00 (-0.10)	0.00 (-0.17)	-0.01*** (-2.82)	-0.04* (-1.72)	-0.01*** (-7.95)	-0.06*** (-2.83)
Size	0.00*** (-2.91)	0.05*** (-4.03)	0.00 (-1.58)	0.05*** (-8.18)	0.01*** (-5.42)	0.06** (-4.66)	0.00*** (-3.43)	0.06*** (-4.33)
Age	0.00*** (-3.93)	0.00*** (-4.34)	0.00* (-1.82)	0.00** (-3.37)	0.00** (-2.50)	0.00*** (-3.86)	0.00*** (-3.53)	0.00*** (-4.10)

<i>Branch</i>	0.00*** (-3.09)	0.00 (-0.66)	0.00* (-1.67)	0.00** (-1.85)	0.00*** (-2.59)	0.00 (-0.24)	0.00** (-2.36)	0.00 (-0.19)
<i>Sub Branch</i>	0.00 (-1.31)	0.00 (-0.86)	0.00*** (-2.69)	0.00 (-0.55)	0.00* (-1.87)	0.00 (-1.28)	0.00 (-0.79)	0.00 (-1.22)
<i>Cash Office</i>	0.00*** (-4.78)	0.00 (-0.21)	0.00 (-0.37)	0.00** (-2.54)	0.00*** (-3.18)	0.00 (-0.49)	0.00*** (-3.76)	0.00 (-0.24)
ATM	0.00*** (-3.19)	0.00 (-0.20)	0.00 (-1.29)	0.00 (-2.12)	0.00 (-1.03)	0.00 (-0.61)	0.00*** (-3.14)	0.00 (-0.13)
Adjusted R <sup>2</sup> .	0.23	0.16	0.44	0.64	0.46	0.20	0.24	0.17
F-statistic	24.20	16.54	5.44	10.87	67.68	20.30	26.50	17.00
Prob(F-stat.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Note:** \*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1 percent levels, respectively; The number of observations is 711; t values pointed out in parenthesis.

RCFO influences positively the performance both measured with ROA and ROE, it means the higher the *abnormal* of the positive operation cash flow, the better the performance. This result is in consistent with the prediction. RIE and RDE influence negatively and significantly the performance both measured with ROA and ROE. It means the higher does the earnings management through the interest expenses and discretionary expenses, the lower the performance. In the other words, bank with the *abnormal* interest expenses and high discretionary expenses will influence negatively the performance, this result is in consistent with the prediction.

The greater the *abnormal* of cash flow from operation, the higher the firm performance, because the banks with the *abnormal* positive high cash flow from operation are the banks with the good liquidity, so they will be able to catch the existed business opportunity. Thus the RCFO has a positive effect on financial performance. RIE and RDE have negative effect on financial performance; it means the greater the *abnormal* interest and discretionary expenses the lower the bank's financial performance. Expenses reducer earnings; therefore, if the expenses is high, the profit will decrease automatically, so the performance measured with ROA and ROE will decrease also.

This research result supports the finding (Ewert and Wagenhofer, 2005; Roychowdhury, 2006; Graham *et al.*, 2005; and Gunny, 2005) that found the real earnings management influences negatively the performance. Why does REM influence negatively the performance? It may be because: 1) the earnings management based on the real activities consumes the company *resources* and deviates from the normal business practice. If the firm changes the time and real business transaction, they deviate from the optimal planning and disturb the company real cost (Ewert and Wagenhofer, 2005). 2) The real activities manipulation can reduce the firm value because the action of the profit improvement in the present period can influence negatively the cash flow of the future period (Roychowdhury, 2006). 3) Besides, the expropriation of the controller shareholders can also be done by using the real earnings management (Thomas *et al.*, 2004; Graham *et al.*, 2005; Roychowdhury, 2006; Saanoun *et al.*, 2013; Luo *et al.* 2012; and Johnson *et al.*, 2000), that has the potentation to decrease the company performance.

### The Earnings Management Mediates the Effect of Ownership Concentration on Financial Performance

Based on result hypothesis 1, 2, and 3, it is known that AEM does not mediate the effect of the ownership concentration on performance, both measured with ROA and ROE. The *real earnings management* mediates the ownership concentration influence toward performance through the operation cash flow. It means that the family control can influence directly the performance and can also influence indirectly through RCFO. RIE does not mediate the effect of ownership concentration on the performance, because the ownership concentration does not effect RIE. The result shows that RDE mediates the effect of ownership concentration on performance. It can be seen from the significant influence of the ownership concentration toward RDE and RDE significant influence toward performance. This result

shows that the ownership concentration can influence directly the performance and can also influence indirectly earnings management through RDE.

The mediation nature of RCFO and RDE is semi mediation, because when the influence of independent variable of ownership concentration toward dependent variable (*financial performance*) that is formerly significant, still significant after controlled with mediator variable, so the semi mediation happens. Based on that result, it can be known that the ownership concentration still influences significantly the performance, after controlled by mediation variables of RCFO and RDE.

#### IV. Conclusions

This research is able to prove that the ownership concentration on Indonesian banks gives more the effect *entrenchment* rather than *alignment*. The ownership concentration has a negative on performance, both directly and indirectly through the real earnings management. The ownership concentration has a positive effect on the real earnings management through discretionary cost, furthermore the real earnings management have a negative effect on performance. The real earnings management mediates the ownership concentration influence toward the bank financial performance in Indonesia, but not the accrual earnings management. It indicates that the expropriation of the controller shareholders toward the firm resources through the real earnings management has happened. The real earnings management is not only used in hiding, but also as the tool to take the private benefits. It also indicates that it is very possible that the controller owners take the private benefits as long as the company operates, that causes damage toward all year performance.

The control variables of the family and non family control sharpen the analysis more. It indicates that among the controller shareholders, the control by family and private institution have the significantly low performance compared with the control by foreigners and government. The expropriation indication of family control through the real earnings management is higher than the non family control. The ownership concentration does not influence the *accruals earnings management*. It indicates that the controller shareholders were not interested in using the accrual earnings management to hide and expropriate. It may be because the accrual earnings management with the nature *reverse* inter period, unable to hide and cannot be used to expropriate permanently and continuously. This research found the strong indication of the controller shareholders' expropriation, especially the family, through the real earnings management.

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## **Does Family Control Strengthen the Negative Influence of Earnings Management on the Performance of IDX Listed Banks?**

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### **Abstract**

This study aims to provide empirical evidence about the influence of family control on the relationship between earnings management with the performance of the banks listed on the Indonesia Stock Exchange (IDX). Performance of banks is observed in terms of three dimensions: efficiency, profitability and the level of risk.

The results show that family control reinforces the bad influence of real earnings management (REM) on the performance in terms of efficiency, profitability and the level of risk. Family Control also reinforces bad influence accruals earnings management (AEM) on the performance of efficiency and profitability, but does not affect the relation between AEM on level of risk. Both AEM and REM in family-controlled banks negatively affect the performance in terms of efficiency, profitability, and risk level. These results indicate that the family control uses both accruals and real earnings management to hide and get private benefits.

REM in non-family controlled banks also has a negative effect on efficiency and profitability. REM does not affect the level of risk in non-family banks but adversely AEM positively (bad) affects the level of risk. AEM in non-family controlled banks positively affects performance in terms of efficiency and profitability. It indicates that the non-family control uses accrual-based earnings management which is not for expropriating.

Key Words: Expropriation, Earnings Management, Family Control, Efficiency, Profitability, Risk.

## I. Introduction

This study aims to provide empirical evidence about the influence of family control on the relationship between earnings management on performance of banks listed on the Indonesia Stock Exchange. Performance in this research consisted of three dimension, they are efficiency, profitability and risk level of the bank. What does family control strengthens or weakens the effects of earnings management on the performance. If the controlling family strengthening a bad influence of earnings management on the performance, it indicates that earnings management is used as a tool to hide or expropriate.

This research is motivated by the phenomenon of most companies in the world have ownership structures concentrated and controlled by the family (La Porta, Lopez-de-silanes, & Shleifer, 1999). Faccio and Lang (2002) found that 44% of companies in the countries of Western Europe are owned by the family, while 37% is owned by various owners. The form of concentrated and controlled family ownership is prevalent in countries West European, except in UK and Ireland (Faccio and Lang 2002), in Latin America, especially Brazil (Rogers, Dami, Ribeiro, & Sousa, 2007) and in East Asia, excluding Japan (Claessens et al. 2000; Du and Dai 2005). Concentrated ownership does not occur in the United States and Britain, but it occurs in 20 large companies in France, Germany, and Italy (Enriques & Volpin, 2007). Companies in Indonesia the bulk (71.5%) is controlled by the family and only a few private companies owned by various owners (Lukviarman, 2004).

Concentrated ownership structure and is controlled by the family have potentially agency conflict because such structures provide a strong incentive for the controlling family to expropriate the company's resources at the harm of the interests of non-controlling shareholders (Villalonga & Amit, 2006). The higher the family control indicates the lower the performance of the organization (Oswald, Muse, & Rutherford, 2009). The ownership of insiders is ineffective in harmonizing (aligning) the decision to maximize the value of the company (Al-Fayoumi, Abuzayed, & Alexander, 2010). Expropriation indications of the controlling shareholder of the family also occurs in many cases of banks in Indonesia, for example, the case of liquidation of 16 banks and 7 banks suspended operations during the economic crisis, Bank Summa case, the case of Global Banks and the Bank Century case.

Agency conflict in family control potentially affect earnings management practices and company performance. Therefore, this research will examine the relationship between family control, earnings management and performance of banks listed on the Stock Exchange. By examining the relationship thereof, is expected to provide a more precise picture of the expropriation done by the owner of the controlling family.

The expropriation of the controlling shareholders, insiders, and managers can be hidden and done use of earnings management (Wright et al. 2006; Achmad et al. 2009; Leuz et al. 2003; Healy 1985; Crocker and Slemrod 2007; Abdolmohammadi et al. 2010; Saanoun et al. 2013; Jian and Wong 2010). Earnings management may use Accrual-based diskresionari and real activity manipulation. Accrual-based earnings management raises the possibility of bias in the interpretation, because the earnings management is reverse between periods (Dechow et al. 2011; Watts and Zimmerman 1986; McNichols and Wilson 1988; Dechow 1994; and Jones 1991). Therefore in this research will also be used by the earnings management based on real activity is expected more precise in detecting indications of the expropriation of the controlling owners of the banks listed on the Indonesian Stock Exchange.

This research is important because: first, the phenomenon of corporate ownership structure in East Asia, including Indonesia, concentrated and controlled by the family. It provides a strong incentive for the controllers owner to do expropriation. Second, research on earnings management based discretionary accrual and loan loss provisions in banking have been done (Shrieves and Dahl 2003; Anandarajan et al. 2005; Agarwal et al. 2007; Koh 2007; Fonseca and Gonzales 2008; Kanagaretnam et al. 2009; Cornett et al. 2009). However, it is still rare to find research that examines earnings management based on real activity in the banking. Third, research that examines the effect of real and accrual earnings management on the performance with the moderating variable the family control yet. This research is important because it controls the family as a moderating variable is expected to give a more precise picture of the level of expropriation done by the owner of the controlling family.

## II. Expropriation through Earnings Management and Performance

Expropriation or taking private benefits by controlling owner, insiders, and managers can be hidden and done using earnings management. For example, Wright et al. (2006) found that managers in the UK and in the US manage the earnings decline before the sale of shares through a management buy-out (MBO). Furthermore, they found that managers in the US were significantly more aggressive than in the UK, and they had lower profits. The manager lowered profit before MBO, in the hope the value of the stock will go down, when they bought the company's stock. The controlling shareholder in Indonesia manipulated earnings to hide the private benefits obtained through expropriation (Sanjaya, 2011). Nonfamily companies in Indonesia have return on assets higher (7.37%) than family firms (1.56%). This evidence raises concerns about the possibility of earnings manipulation and entrenchment of the earnings (Achmad et al., 2009). Findings Ahmad et al., (2009) is supported by Leuz et al. (2003) which states that insider protect the private benefits of controls to hide the company's performance through earnings management. The earnings management decreased if stronger investor protection, because it reduces their incentive to conceal the company's performance (Leuz et al. 2003).

The manager made a accrual accounting policy to maximize the bonus (Healy 1985; Crocker and Slemrod 2007). Accrual accounting policies and changes to the policies made by top managers reported earnings related to the contract and their bonus plans (Healy, 1985). Managerial compensation contracts to encourage managers to hide actions that may affect the actual earnings (Crocker and Slemrod, 2007). They examined the case of Canadian Telecommunication Company Nortel, or Northern Telecom (NT). The executives NT manage profits to obtain cash bonus. They get a bonus of more than NT \$ 50 million in mid-2003, although in April 2004 NT reported a decline in profit, and sacked its chief executive. In August 2004 they dismissed more than 7 top executives NT. NT incident also shows how the misstatement of financial statements will be costly for the company. NT's new CEO stated that nearly half employees involved in the efforts to manage and re-statement financial statements.

Earnings management is also done by the insider or controlling owner to maximize its interests (Abdalmohammadi et al. 2010). They found that family-private companies operating in Norway generally manages earnings declined compared with non-family private company. However, the conditions of high leverage of the private family firm show a strong tendency to manage earnings by raising the earnings figures of the non-family private company. The research also found that family CEOs are generally more loyal to prioritize earnings management in accordance with the interests of the family than non-family CEO, despite the presence of an independent board to a certain extent can reduce earnings management in family firms (Abdalmohammadi et al., 2010).

In order to conceal and carry out the expropriation, the owner controller, insiders, and the manager also uses real earnings management. Expropriation by the managers and shareholders of blocks is done through group-related transactions and excessive executive compensation (Saanoun et al. 2013). The companies listed in China prop up profit by using abnormal sales to groups associated with their controlling owner (Jian and Wong, 2010). Abnormal sales are done by cash-based, then after propping ends, there are significant cash transfers of listed companies to the controlling shareholder (Jian and Wong, 2010).

Based on the results of research can be concluded that the earnings management can be used by the controlling shareholders, insiders and managers to hide and done expropriation (Wright et al., 2006); Ahmad et al., 2009; Leuz et al., 2003; Healy, 1985; Crocker and Slemrod, 2007; Abdalmohammadi et al., 2010; Saanoun, 2013; Jian and Wong, 2010). Expropriation of firm family owned is higher than that of the wider community (Nenova, 2003). CEO families are generally more loyal to prioritize earnings management in accordance with the interests of the family than non-family CEO (Abdalmohammadi et al., 2010). Expropriation family control through accrual and real based earnings management, of course, will adversely affect the performance of the banking system. It also supported Indications of expropriation of the family control in Indonesian banking, not only degrade performance, but it can cause a bank become insolvent. For example, the case of Summa Bank, Global Bank, Century Bank, the liquidation of 16 banks and shutdowns 7 banks during the economic crisis. Therefore, this research assumed that the control of the family will strengthen the negative effect management earnings on performance.



This conjecture can be expressed in the form of the hypothesis (H) as follows:  
H: Family control strengthening of the negative effects of accrual-based and real activity earnings management on performance.

### III. Research Methods

#### 3.1. Data

This study uses the data of national commercial banks listed on the Indonesia Stock Exchange, in the period 2006 to 2011. Secondary data such as financial statements and financial ratios was obtained from the Indonesian Banking Directory (BI 2006-2012) and of the annual report issued by the Indonesia Stock Exchange. Data ownership and control of the family came from Bank Indonesia. The samples used in the study were 29 samples for 6 years, so there are 174 observations.

#### 3.2. Variables

This research consists of a dependent, independent, the moderation and control variables. The dependent variable is the performance, independent of earnings management, moderation variable is family / non-family control. the control variables are corporate governance, the level of ownership concentration and firm size.

Performance was measured using a 3 bank dimensional that reflects the level of efficiency, profitability, and the level of risk bank. Efficiency indicator is the net interest margin (NIM). Indicator of profitability is the return on assets (ROA). Indicator of the level of risk is adequate capital ratio (CAR). NIM is obtained from net interest income divided by average earning on assets. The higher the NIM indicates the more efficient the bank. ROA is obtained from net income per total assets. The higher the ROA indicates the better performance of the bank.

CAR indicator of the level of risk derived from capital divided by weighted assets. The higher the CAR indicates better level of risk. The independent variable is earnings management. Earnings management measured using earnings management of based accrual specific bank model (Beaver & Engel, 1996) and based on real activity. Earnings management based on real activity derived from the model Roychowdhury (2006), adapted to the banking business. The real earnings management used is real earnings management through interest expenses because the main expense in the banking business.

Moderation variable of this study is the controlling family. Family control consists of: dummy variables controlling family and non-family control. Control by the family (D\_fam) coded 1. Control nonfamily is coded zero. Control of non-family consists of: the government control (D\_Gov), control by the domestic private institutions (D\_Priv), and control by foreigner (D\_Forg). The controlling criteria are the largest percentage share ownership

Control variables in this research is corporate governance (CG) were measured using a proxy of corporate governance index (ICG), the concentration of ownership as measured by using a proxy largest stockholders (largest), and the size of the company as measured by log total assets (size). The ICG consist of 15 items, that are the independence of the board of directors, audit committee, remuneration and nomination committee, and corporate governance committee. ICG also contains disclosure of financial relationships between board of commissioners and directors, honorarium board of directors, remuneration disclosure, disclosure of details of transactions with affiliated parties, and disclosure of the structure of the group companies.

#### 3.3. Analysis Techniques

Analysis technique to test the effect of moderating variables that strengthens or weakens the relationship between earnings management and performance is regression analysis of panel data estimation Generally Least Square (GLS). Panel data regression analysis is used because the research data consists of time series data (several years) and cross section (many banks).

#### 3.4. Equation Model Research

The research model to examine the relationship between family control, earnings management and performance, as well as control variables ICG, the concentration of ownership and the size of the company is as follows:

NIM	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1a)
BOPO	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1b)
ROA	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1c)
ROE	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1d)
CAR	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1e)
ETA	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1f)
LDR	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1g)
NPL_N	=	$\beta_1 + \beta_2 \text{ AEM} + \beta_3 \text{ D\_Fam} * \text{AEM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P1h)
NIM	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2a)
BOPO	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2b)
ROA	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2c)
ROE	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2d)
CAR	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2e)
ETA	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2f)
LDR	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2g)
NPL_N	=	$\beta_1 + \beta_2 \text{ REM} + \beta_3 \text{ D\_Fam} * \text{REM} + \beta_4 \text{ ICG} + \beta_5 \text{ Largest} + \beta_6 \text{ Size} + e.$	(P2h)

#### IV. Results and Discussion

##### 4.1. The influence of Earnings Management on the efficiency moderated FC.

Results showed that family control moderate the relationship AEM to the efficiency of the bank as measured by the NIM. Family controls strengthen the negative effects of accrual-based earnings management to NIM. AEM bank controlled by nonfamily has positive effect on NIM, which is indicated by AEM coefficient of 0.004. AEM family controlled banks negatively affect NIM. This is indicated by the coefficient of AEM plus D\_FamxAEM coefficient of negative. These results remained consistent after controlled by ICG, the concentration of ownership (largest) and firm size.

Table 1  
The Effect of Earnings Management on NIM, Moderated Family Control

Description	NIM Dependent Variable					
	Koef.		t stat.	Koef.		t stat.
<b>Panel A: variabel independen AEM</b>						
C	0.053	***	94.050	0.002		0.103
AEM	0.004	***	2.906	0.001		0.265
D_Famxaem	-0.016	**	-8.389	-0.013	***	-3.939
ICG				0.000		-0.031
Largest				-0.003		-0.947
Size				0.004	***	3.478
Adj. R <sup>2</sup>		0.196			0.228	
F-statistic		22.094			11.238	
Prob(F-statistic)		0.000			0.000	
<b>Panel B: Variabel independen REM</b>						
C	0.058	***	110.48	0.090	***	4.148
REM	-0.009	***	-4.598	-0.008	***	-6.016
D_Famxrem	-0.010	**	-1.928	-0.01	**	-2.321
ICG				-0.001		-0.065
Largest				-0.035	***	-5.046
Size				0.000		0.119
Adj. R <sup>2</sup>		0.225			0.406	
F-statistic		26.165			4.579	
Prob(F-statistic)		0.000			0.000	

\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1 percent levels, respectively. Number of Observastion are 174.

This result means that AEM has different effects between the banks controlled by family and non-family. AEM banks controlled by non-family have a significant positive effect on efficiency as measured by the NIM. Otherwise, AEM have negative affect on NIM in the bank controlled by the family.

Results showed that family control moderate the relationship of REM with efficiency as measured by the NIM. Families control strengthens the negative effects of earnings management based on real activity on the NIM. REM banks, controlled by non-family, negatively affect NIM which is indicated by the parameter REM coefficient of -0009.

REM family controlled banks have negative effects on NIM. This is indicated by the coefficient REM plus D\_FamxREM coefficient of -0019. These results remained consistent after controlled by ICG, the concentration of ownership and the size of the company. These results mean that the REM has a negative effect on NIM, both at the family-controlled bank and non-family.

#### 4.2. The Effect of Earnings Management on ROA moderated FC

Results showed that family control moderate the relationship AEM on performance as measured by ROA. Families control strengthen the negative effects the accrual-based earnings management on performance.

Table 2  
The effect of Earnings Management On ROA Moderate Family Control

Description	ROA Dependent Variable				
	Koef.		t stat.		
Panel A: variabel independen AEM					
C	0.017	***	36.028	-0.076 ***	-8.942
AEM	0.010	***	5.511	0.007 ***	2.715
D_Famxaem	-0.012	***	-3.289	-0.008	-1.583
ICG				-0.013 **	-2.447
Largest				-0.002	-0.459
Size				0.008 ***	12.798
Adj. R <sup>2</sup>	0.060				0.274
F-statistic	6.612				14.090
Prob(F-statistic)	0.002				0.000
Panel B: Variabel independen REM					
C	0.017	***	35.651	-0.049 ***	-4.745
REM	-0.007	***	-5.437	-0.002 **	-2.120
D_Famxrem	-0.006	***	-5.199	-0.008 ***	-5.168
ICG				-0.007 **	-2.077
Largest				-0.006	-1.508
Size				0.006 ***	7.981
Adj. R <sup>2</sup>	0.446				0.375
F-statistic	5.637				4.140
Prob(F-statistic)	0.000				0.000

\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1 percent levels, respectively. Number of observation are 174.

#### 4.3. The Effect of Earnings management on Risk Level (CAR) moderated FC

Results showed that the family control does not moderate the effect of AEM to the level of risk as measured by the CAR. AEM banks controlled by non-family have negative affect on the CAR, which is indicated by AEM coefficient of -0033. This negative effect is a bad influence, because it means that the greater the AEM, the lower CAR.

AEM family controlled banks have negative affect to the CAR. This is indicated by the coefficient of AEM plus D\_FamxAEM coefficient = -0.0168. AEM negative effect on CAR means

that the bigger AEM, the smaller CAR, or a higher level of risk. These results remained consistent after controlled by ICG, concentration of ownership, and firm size.

Table 8  
The Effect of Earnings Management on The CAR Moderated FC

Keterangan	Variabel Dependen CAR					
	Koef.		t stat.	Koef.		t stat.
Panel A: variabel independen AEM						
C	0.169	***	53.838	0.328	***	4.216
AEM	-0.033	***	-3.557	-0.031	***	-2.957
D_Famxaem	0.016	*	1.717	0.013		1.254
ICG				-0.006		-0.282
Largest				-0.004		-0.208
Size				-0.011		-1.900
Adj. R <sup>2</sup>	0.067			0.073		
F-statistic	7.243			3.727		
Prob(F-statistic)	0.001			0.003		
Panel B: Variabel Independen REM						
C	0.181	***	40.159	0.457	***	10.478
REM	-0.002		-0.551	-0.003		-0.762
D_Famxrem	-0.017	**	-2.368	-0.028	**	-2.223
ICG				-0.002		-0.092
Largest				-0.025	*	-1.725
Size				-0.020	***	-9.299
Adj. R <sup>2</sup>	0.064			0.079		
F-statistic	1.396			3.982		
Prob(F-statistic)	0.101			0.002		

\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1 percent levels, respectively. Number of observation are 174.

Results showed that family control variables moderate the influence of REM on the level of risk as measured by the CAR with a significance level below 5%. REM bank controlled by nonfamily has not affected the CAR.

REM family controlled banks have negative affect to the CAR. This is indicated by the coefficient REM plus D\_FamxREM coefficient = -0.0186. REM have negative effect on CAR means that the bigger REM, the smaller CAR, or a higher level of risk. These results remained consistent after controlled by ICG, concentration of ownership, and firm size. This result means that REM has a negative effect on the level of risk as measured by CAR at the the controlling family, but it has no effect on the non-family control.

#### 4.4. Summary of Results and Discussion

Family control strengthens or moderates negative effects of accrual earnings management to the efficiency. AEM the bank controlled family has different effects by non-family. AEM banks controlled by non-family have a significant positive effect on efficiency, whereas a negative effect on the bank controlled by the family. These results remained consistent after controlled by ICG, concentration of ownership, and firm size. Families control strengthens the negative effects REM on the efficiency. REM has a negative effect on efficiency, both in the family-controlled bank and non-family. These results remained consistent after controlled by ICG, concentration of ownership, and firm size.

Family control strengthens negative effects of the AEM on performance. AEM banks controlled between by families and non-family have different effects on performances. AEM

banks controlled by non-family have a positive effect on performance, contrary AEM negatively affect the performance of the family-controlled bank. These results remained consistent after controlled by ICG, concentration of ownership, and firm size. Families control strengthens the negative effect of REM on performance. REM has a negative effect on performance, both at the family-controlled bank and non-family. These results remained consistent after controlled by ICG, concentration of ownership, and firm size.

The family control did not moderate the effect of AEM to the level of risk. AEM bank controlled by the family and non-family negatively affect to the CAR, which means that the greater the AEM associated with lower CAR, so the more risky. These results remained consistent after controlled by ICG, concentration of ownership, and firm size. Families control strengthens the bad influence of REM on the level of risk. REM has a different effect between the controlling family and non-family. REM at the family-controlled bank has a negative effect on CAR, meaning that the higher the REM, the lower the CAR and the higher the risk. However, the REM of the bank controlled by non-family does not affect the CAR. These results remained consistent after controlled by ICG, concentration of ownership, and firm size. Overall it can be concluded that families control strengthen the negative influence of REM on the performance both in terms of the dimensions of efficiency, profitability and risk level of the bank. Families control strengthen the negative effects of the AEM on performance in terms of the dimensions of efficiency and profitability, but not moderate influence AEM on the level of risk. These results support the hypothesis entrenchment (agency conflict type 2) which states that the higher the level control right to decision-makers, the lower of the performance of the organization (Oswald et al., 2009; Al-Fayoumi et al. 2010). These results also support previous research findings that family control, insiders, and the manager indicated use earnings management to conceal and done the expropriation of the company's resources (Wright et al., 2006); Ahmad et al., 2009; Leuz et al., 2003; Healy, 1985; Crocker and Slemrod, 2007; Abdolmohammadi et al., 2010; Saanoun, 2013; Jian and Wong, 2010).

AEM bank controlled by nonfamily positive effect on performance in terms of the dimensions of efficiency and profitability, but a negative effect on the risk. These results indicate that the non-controlling family using accrual-based earnings management to optimize the contract, and not to expropriate. Earnings management is done to acquire flexibility for managers to protect themselves and anticipate events that are unpredictable in order not to harm the parties involved in the contract (Scott, 2012).

Both AEM and REM at the family-controlled bank have negative effect to performance in terms of the dimensions of efficiency, profitability, and the level of risk. However the case is not always on the banks controlled by non-family. This result means that the controlling family uses either accrual or real earnings management to hide and do expropriation. These results are consistent with the findings of Zang (2012) which found that managers manipulate earnings using real activity and at the end of the fiscal year, fine-tune with decisions based on accrual.

## V. Conclusion

Families control strengthens the negative influence of REM on the performance both in terms of the dimensions of efficiency, profitability and risk level of the bank. Families control strengthens the negative effects of the AEM performance in terms of the dimensions of efficiency and profitability, but not moderate influence AEM on the level of risk. Both AEM and REM at the family-controlled bank have negative effect to the performance in terms of the dimensions of efficiency, profitability, and the level of risk. However the case is not always on the bank controlled by non-family. This result means that family control uses either accrual or real earnings management to hide and do expropriation. AEM bank controlled by nonfamily positive effect on performance in terms of the dimensions of efficiency and profitability. These results indicate that

the non-family control using accrual-based earnings management to optimize the contract, and it does not to expropriate.

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## **Developing an Enhance Awareness and the Capacity Program for Human Resource in Hospitality Industry**

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### **Abstract**

This study aims to establish a program that will enhance awareness and the capacity of human resource in hospitality industry focus on Thai tour guides as well as those who are involved with tourism activities in Khonkaen, Nan, Nakhon Srithammaraj, and Chonburi. Focus groups were organized to study the needs and to develop the program; they were comprised of following topics 1) the development of local creative tourism routes 2) search for products and services to increase income 3) knowledge about contemporary tourism and service industries 4) test of the trial program with 430 Thai tour guides and a comparison of the levels of participant's understanding before and after participating the study. The results of the study showed that the participants have statistically improved in all aspects. The result of this study is relevant to personnel development in hospitality industries.

**Keyword** : Developing Program, Human Resource, Hospitality Industry

### **I. Introduction**

Tour guides and those who are associated with tourism activities are part of a tourism supply chain. They play important roles in increasing income from tourists—in stimulating purchase (creating demand) as tourists generally feel that they are not as knowledgeable as the tour guides or those who are associated with tourism activities (Asymmetric Information). Thus, tour guides, and those who are associated with tourism activities, can persuade and convince tourists to demand tourism products (Inducing Tourist's Demand). If tourists and those who are associated with tourism activities apply the advantages achieved by this study, they can thoroughly understand tourist's demands, recommend tourism products that are suitable to the



needs of the tourists, and stimulate purchase of tourism products. By doing so, tourists would be impressed by their experience, and Thailand would receive higher income from tourism. The vital objective of this study is to encourage development of tour guides and those who are associated with tourism activities in Thailand to enhance their capacity and help them meet the current demands.

## **II. Research Objectives**

2.1) To analyze gaps between the awareness and capacity of Thai tour guides, as well as those who are associated with tourism activities, that could increase income from tourists through means that are responsible to society and tourists.

2.2) To create a program that promotes the awareness and capacity in the identified aspects of Thai tour guides, as well as those who are associated with tourism activities in Khon Kaen, Nan, Nakhon Srithammaraj, and Chonburi.

2.3) To train and provide consultation for Thai tour guides, as well as those who are associated with tourism activities, to prepare them to increase income from tourists through means that are responsible to society and tourists.

2.4) To analyze problems and obstacles that obstruct tour guides and those who are associated with tourism activities, and provide recommendations for various relevant aspects.

## **III. Result Summary**

The result can be summarized based on objectives of the project as follows:

3.1) Gap analysis between the awareness and capacity of Thai tour guides, as well as those who are associated with tourism activities, that could be used to increase income from tourists through means that are responsible to society and tourists. The focus group, of 10 respondents, was comprised of tour guides for Thai and foreign tourists included the key interview point as follows:

The identification of capacity points of Thai tour guides, and those who are associated with tourism activities, to be improved in order to increase income from tourists through means that are responsible to society and tourists. Tour guides are the individuals that create, and transfer, awareness about the country to the tourist. It was found that –

1. Develop a supply chain for marketing services- The system organized by the government is not strict enough to control or manage foreign entrepreneurs who operate their businesses, through offering commercial stores, restaurants, and other services, for tourists from countries such as China, Japan, Korea, Russia, etc. The term ‘foreign entrepreneurs’ refers to both owners and managers of businesses. Their services begin at their country of origins; continue as the tourists arrive and travel around Thailand; and finish when the tourists travel back to their countries. Tourists receive services from entrepreneurs who have the same nationality; therefore Thai entrepreneurs would not receive any benefits from this supply chain at all. Tour guides would also be those with the same nationalities, making Thai tour guides and those who are associated with full-service tourism activities unable to receive the benefits. Received income would then still fall into the pocket of foreign entrepreneurs.

Tour guide development can be divided in following two ways:

1) Tour guide development program—As the existing program is not efficient and cannot reach the maximum capacity of tour guides, the government needs to put emphasis on

developing a quality program more seriously.

2) Tour guide development—As tour guides still lack potential, part of the development includes knowledge enhancement in order to increase service capacity, and creativity development in order to propose exciting and innovating tour programs. Generally, once tour guides receive their Tour Guide Card, they usually stop self-improvement as they feel that they have already achieved the Card and there is no need to improve further.

2. Tour guide capacity development to increase income—It was found that tour guides need to improve in the following four key aspects:

1) As innovative tour guiding requires experience, judgement, wit and quality management, tour guides require continuous learning in order to develop their knowledge and apply it to their work.

2) Tour guide skill development in various aspects, e.g. tour guide service skills, communication skills, human relations skills, management skills, team work skills, and change management skills.

3) Development in attitude, thinking and feelings towards a situation or an environment, including ‘pride of being Thai, and pride of being (him/her) self’.

4) Service development, which includes service helpfulness and sincerity, understanding, generosity, the provision of quality information, language skills, and tour guide ethics.

From the study, the researcher has designed development framework tools in order to be the criteria to evaluate the awareness and capacity of Thai tour guides and personnel which includes 4 skills, 27 indicators, and 73 result summaries.

3.2) Programs to enhance the awareness and increase capacity in topics essential to those who are associated with tourism activities in Khon Kaen, Nan, Nakhon Srithammarat, and Chonburi have been established by selecting the indicators in the highest demand for each skill from the results of the awareness and capacity evaluated of Thai tour and those who are associated with tourism activities. The list of development topics is as follows:

1) The development of local creative tourism routes – Topics include: local information in respect to tour guiding, transportation, accommodation, restaurants, souvenirs and local product shops, and local tourism route guidelines.

2) Search for products and services to increase income – Topics include: information about the type of new tourism products and services, tourism products and service integration guidelines to increase income, and information hubs to search for tourism products and services.

3) Knowledge about contemporary tourism and service industries – Topics include: knowledge and channels regarding contemporary tourism and service industries, enhancing and developing tourism networks, and network collaboration skills.

3.3) Training and consultation aimed towards awareness and capacity enhancement programs for Thai tour guides and those who are relevant with tourism activities in Khon Kaen, Nan, Nakhon Srithammarat, and Chonburi.

This study has tested the awareness and capacity enhancement program for Thai tour guides and those who are associated with tourism activities. The program has been conducted 4 times with 430 participants in Khon Kaen, Nan, Nakhon Srithammarat, and Chonburi. The results from the tests regarding participants’ understanding before and after

participating was significantly different at 99 per cent confidence in all development topics. Thus, it can be concluded that participants improved their skills in all aspects.

3.4) To analyze problems and obstacles that obstruct tour guides, and provide recommendations for various relevant sectors.

From the tour guide practice analysis regarding mechanics to increase income from tourists, it was found that problems and obstacles that need to be enhanced could be divided into 4 points, in order to achieve success, with details as follows:

1. The development of administrative and management structure for the Thai tourism industry

Income distribution of the tourism industry is not systematic, as tourism entrepreneurs have been established/identified in advance to cater tour groups consisting of members from their native countries—e.g. Chinese entrepreneurs would be assigned and target Chinese tourists specifically. As a result, Thai entrepreneurs and Thai tour guides would be left with a typical tour agenda (tour program) which would result in a decrease in income for Thai entrepreneurs and Thai tour guides, as majority of tourism generated income would go back to the tourist's country of origin.

2. Develop a body of knowledge of tour guides

Knowledge and the ability of Thai tour guides and those who are associated with tourism activities is still at a stage where it requires self-improvement in order to help increase income. Since knowledge about each location, service center, and attraction—including geographic, historical, and cultural tourism—depends on the ability of each tour guide, self-learning and knowledge development is needed for each tour guide.

3. Develop tour guide training programs.

Tour guide training is important and essential, especially during today's fast-paced world. Tourism, as a key and important income generator, needs to adjust to be up-to-date. Up-to-date tour guide training development is, therefore, vital. However, those training-program developers also need to consider the timing of the training as tour guides generally have unpredictable working hours. Thus, technology, like e-learning, could be employed in order to increase accessibility for tour guides. Plus, a concise and get-to-the-point timeframe is also recommended.

4. Tour guide and service standard developments.

Even though Thailand requires tour guides to pass legally specified training and standardized tests, this is only basic training and, most importantly, only a one-time session. Once the approved tour guide card has been received, there is no other legal measure to require them to train or pass any other process again. That said, there could be lack of monitoring, procedures for improvement, or a lack of encouragement for them to maintain and develop tour guide and service standards. Thus, relevant agencies should review additional measures for tour guides in order for them to maintain and develop their standards consistently—e.g. a measure about brief additional training before renewing their tour guide card. All in all, flexible timing should also be considered as they generally work unpredictable hours.

#### **IV. Recommendations for Future Study**

In order to make the study more inclusive and clearer in the future, the researcher has recommended that this research to be conducted again in secondary tourism areas of each

region in order to compare the needs for personnel development for those who are associated with the Thai tourism. By doing so, the future study could explore differences between the studied primary tourism areas and the future secondary tourism areas. Furthermore, it could also help develop guidelines to be used as the standard program in the future.

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# **Earnings Announcement Idiosyncratic Volatility and the Cross-section of Stock Returns**

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## **Abstract**

We document a significant positive relation between earnings announcement idiosyncratic volatility and stock returns in the 10-day window before future earnings announcements. The average of risk-adjusted return differences between stocks with the highest earnings announcement idiosyncratic volatility and stocks with the lowest earnings announcement idiosyncratic volatility exceeds 100 basis points in the 10 days leading up to the earnings announcements. The pricing of earnings announcement idiosyncratic volatility is asymmetric where only idiosyncratic volatility based on positive stock returns is priced. This is consistent with the argument that investors have a preference for stocks with large payoffs during earnings announcements.

**Keywords:** Stock returns; idiosyncratic volatility; earnings announcements

# A Study on the Impact of Regional Environments between Vietnam and Taiwan to Taiwanese Manufacturing Firms' R&D Locational Choices

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## Abstract

This paper analyzes the impact of R&D locational choices that manufacturing firms in Taiwan take under the differentiation of locational advantages between Vietnam and Taiwan as well as improves some points which are incompletely focused in the same study on Taiwanese firms, the cross-strait, and overweighing case-studies in the past. The empirical evidences bring that the impact of variables to locational distribution of Taiwanese manufacturing firms across the strait are many: locational advantages, the type of R&D unit, the scale of market, political conditions, industrial clusters, knowledge flows and R&D investments. Except for the negative relationship between the scale of market/type of R&D unit and R&D locational choices, the rest variables have the positive relationship with R&D locational choices, which means that, barring that the scale of market in Taiwan is so small that Taiwanese firms choose to set up R&D spots in Vietnam, other variables in Taiwan are more attractive than those in Vietnam; Taiwan possesses in negligible energies of regional creativity.

**Keywords:** R&D locational choices, locational advantages

## I. Introduction

The competition among countries is graduation replaced by the region competition. The more competitive region often takes a significant role in global economic development. The formation of the regional innovative

system has become an important factor in inspiring developing innovation. Through the formation of the industrial innovative system, the region's competitive has become an advantaged means. In coping with the globalization and region competition, the globalization of enterprise' production has become trends. Dunning (1980) proposed Eclectic Paradigm to explain the development of foreign direct investment. In this paradigm, under the fulfillment of ownership-specific advantage, internalization advantage and locational advantage, the enterprise will likely to engage foreign direct investment. This will result in the lower of the product cost and the new market region. Along with the eclectic paradigm, many researches proposed the idea that multi-nation corporation utilized their own advantage to engage in global labor division and connection successfully. (Dicken, 1998), and proposed that the impact of region advantage to the globalization of industries. The research and development of the development of the internationalization has shifted from developed countries to other countries other than developed countries such as China, Vietnam, and Taiwan. The phenomenon of research development of internationalization has formed ( Amsden et al., 2001 ) . Not only did the multi-nation corporations invest in developing countries, but also developing countries engaged in multi-nation investment. Related studies believed that the selection of the foreign investment of research development has something to do with the location-specific advantage and strategic consideration of the corporation such as economic, resources, the institution policies, the environment of the research and development, the cluster of the industries of the host countries ( OECD, 1997; Gao, 2000; Kumar, 2001; ) . The aforementioned factors mainly targeted the developed countries. What were the considerations when Taiwanese entrepreneurs distributed to regions such as Vietnam? This is the first research motivation.

The importance of investigating the internationalization of Taiwanese corporation's research and development has gained its attention gradually. The research angle include the comparison on the network connection on flag-ship level in investing research and development(R&D) between the two regions, the analysis of the multi-nation corporations' strategic networking of the R&D of the Taiwanese corporation's subsidiary companies in Vietnamese regions, and the strategic location of the Taiwanese corporation in technology and information industries in Vietnam which indicated that Taiwan realized the importance of internationalization of R&D in advancing the competitiveness of the organization. Furthermore, under the background of the geographical neighboring, Vietnam often becomes the critical option in location-specific strategic policies domestically and internationally. On the condition that Vietnam and Taiwan are not in competing position, however, after establishing the R&D modules in both countries. The environmental discrepancies between the two countries will impact on their location-specific strategic policies which attract the different R&D modules to enter the regions. This is the second motivation of this research.

Based on the current research foundations, this research proposed thorough observation of the Taiwanese and Vietnamese R&D distribution stations in the both regions. There are two main focuses: firstly, studies exploring the Taiwanese corporations' selection on Taiwanese corporation investing location in Vietnam mainly focused on the needs of information and technology productions. They underwent the case study research on the individual corporation. Rarely, they paid attention on the R&D of location-specific selections. Therefore, this study targeted the top 500 manufactures as subjects, analyzed Taiwanese corporations' location specific selections. In the hope that, the result drawn can serve the references for the government to encourage the



establishment of R&D center for the domestic corporations. Secondly, studies in the past failed to compare the difference between the Vietnamese and Taiwanese corporations' location specific selections, therefore the environmental impact on the location-specific selections remained unknown. This was also the incentive of this study in selecting the both regions to be the research field. Based on the location-specific advantage perspectives, this study analyzed the environmental differences between Taiwanese and Vietnamese regions, in order to explore the factors that influenced the on the station of the R&D centers of Taiwanese corporations. The results of this study can serve the suggestion to provide an improving R&D environment for the Taiwanese government, in order to advance the Taiwanese corporation competitiveness.

With regard the framework of this study, the second section consists of the research review to analyze the influencing factors on the location specific selection of the environment which served the foundation of the theory and the variable sections accordingly. The third section consists of the comparison of the environmental difference of Taiwan and Vietnam. The fourth section consists of the research design and hypotheses. The fifth section consists of the questionnaire design and the sample data analysis. The sixth section is the establishment of empirical modules and to verify the hypotheses. Last the related suggestions were provided.

## **II. The Location-Specific Advantages and Location-Specific Selection of the R&D**

The creation of R&D knowledge has been the top secret of corporations which has centers on the parent countries. Since 1980, the internationalization of R&D has become the trends of corporations. The arrangement of the multi-nation corporations on the R&D overseas has shifted from the traditional technological transfers to the two-way interactive research on technologies. In order for the corporations to absorb innovative knowledge, to the R&D products transfer of the parent companies, or to provide technological service overseas, they behaved internationally ( Serapio and Dalton, 1999 ). Aside the aforementioned incentives, influencing the decision on abroad location specific selection of the corporations included the location market size, cost, investment environment, policies and prize policies. Due to the fact that the establishment of the R&D station, they had to serve the function of encouraging R&D innovation productions. As a result, they had to paid attention on the development of the local fundamental sciences, the excellence of the research universities, the professional researchers, and the fine infrastructure ( Dunning, 1973 ).

Furthermore, Heimann (2005) proposed the idea that the provision of the domestic cooperation networking of the R&D will stimulate the internalization of the outside knowledge. Therefore the R&D benefits can be maximized. On the other hand, because the failure to symbolize deliver and to create R&D knowledge, the discrepancies of the languages , cultures and societal institutions of the parent countries elicited the social access barriers and cognitive obstacles for the foreign investment. While global economic development takes a significant role, this study analyzed the factors for government attract the foreign corporation investment, including the broad domestic market size, the government policies and the fine fundamental science foundations, low labor cost and preferential policies. This study generalized the four following key factors in attracting the foreign investment in location specific selections. Firstly, there are four key factors in regarding the advantage in location specific section with the host countries. There are the development of fundamental scientific and the human resources of R&D. The host countries' strength in

human resource can be utilized as the application for the foreign investors to engage in the cooperation activities which will reduce the cost in researching the human resources (Kumar, 2001). Secondly, the environment for R&D: the host countries' abundant human resources and abundant facilities, the cluster of industries or the environmental condition have the effect on attracting the establishment of the R&D centers of foreign investment. Thirdly, the market size: to expand the overseas' market is one of the incentives of R&D internationalization ( Serapio and Dalton, 1999 ). The larger the market size of the host country, the more competitive it is for the foreign investor. Therefore, it is more attractive for the corporations. This has served one of the important factors in attracting the establishment of R&D centers for the foreign investors. Fourthly, the policies factor and the protection of the wisdom property: R&D is considered the high investing behaviors. If the host country can provide free taxation, the establishment of free trade protecting area, or the protection of the pattern rights or wisdom property, this is easier for the foreign investor to establish the R&D centers. On the other hand, it is possible to elicit societal and trust into obstacle condition, due to the discrepancies of the culture, society and environment, hinders the willingness of for the foreign corporations( Lorenzen and Mahnke, 2002 ) .

There are two keys regarding the corporations. Firstly, investing strategies of corporations on R&D: when foreign investors engaged in overseas' R&D, there are two categories in their supply and demand incentives. The necessity purpose was to fulfill the goal of localization of the strategies, support the foreign corporation in the manufacture and sales of the host countries. In the demand side, the purpose was to gain the advanced technology, to search for the R&D resource that are short for the corporations, to lower the cost for R&D and to search for better environment for their R&D (serapio & Dalton, 1999). Secondly, the R&D center categories: Ronstadt (1978), based on their functions, categorized into four different types: technology transfer unit, global technology transfer unit, domestic technology transfer unit, and corporate technology transfer unit. In order to fulfill the needs of the abroad subsidiary company in technology, the technology transfer unit refers to a situation where the technology for the parent companies delivered their technologies to the local subsidiaries. Their establishment usually located abroad. Global technology unit' goal mainly develops products that are suitable for overseas' demand, therefore, it is less influenced by the location of the parent companies and the subsidiaries. Domestic technology units usually involved with the foundation of the domestic technologies of the host countries. The main goal was to develop products desirably.

Thus, the key factor in influencing the location-specific selection is location-specific advantage. The influence of regional environment on R&D innovations mainly worked through the approximation effect (Morgan, 1997). Due to the flow of knowledge, the delivery of the flow will be hindered by the distance between places, especially in tacit knowledge. Corporations within the same or neighboring environment tend to interact more and have more opportunities learning from each other than those of outside the regions.

The operators within the regions such as manufactures, schools and R&D institutions, encouraged the formation of the uniqueness of the region through the common shared culture, institution or value and through the accumulations over times (Feldman & Florida, 1994). Furthermore, the industrial polices and governmental subsidies and institutional subsidies in technology and the provision of the research staff facilitated innovative

production from the corporations and therefore, the R&D energies was increased and the advantages were formed as a result of that.

The different advantages in location specific advantage between Taiwan and Vietnam are in areas, markets, populations, industrial structures, financial structures, the budget involved in R&Ds, human resource in R&Ds and in political institutions. Among them, the institutions, industrial policies industrial structures, financial structures and the performance of the regional R&D development are the important factors in influencing the R&D output from the corporations.

When this research analyzed the regional environments of Taiwan and Vietnam, it explored the governmental roles, the industrial structures, the financial structures and the performance of the R&Ds. In governmental roles, the roles of the public sectors and the executive of its related policies were explored. In industrial structures, the organization of the manufactures, the connection of the network, the professional human resource, and the professionalization of the industries were explored ( Glaeser et al., 1992 ; Henderson et al., 1995 ) . In financial systems, the focus was in the soundness of the financial structures and institutions. In the performance of the R&Ds, the focus was in the quality and the quantity of the human resource staff, the budget involved in the R&Ds, and the R&D outputs within the regions. What are the differences in the four perspectives aforementioned between Taiwan and Vietnam? Those differences lead to the location-specific selection of Taiwanese and Vietnamese corporations which were explored in this study. The latter part of this study used the four perspectives aforementioned as the indicators of the comparison between two regions. Nonetheless, those different behaviors drawn from the four perspectives were used to be the selecting variables of the empirical research accordingly.

### **III. Research Design and Hypotheses Establishment**

#### **1. Research design**

This study explored the key factors in influencing the location-specific advantages for Taiwanese and Vietnamese corporations in location specific selections. In more complete standpoints, the comparisons of Taiwanese and Vietnamese manufactures in location specific selections were also analyzed. Targeted the 500 top manufactures in Taiwan and Vietnam, the research field is located both in Taiwan and in Vietnam. The data drawn from Taiwanese manufactures and Vietnamese manufactures regarding the distribution of the factories were also verified. This study took a broad sense to explore the R&D selections of the manufactures. In incorporating data gained from the interviewing the manufactures when undergoing the testing the hypotheses. Adding the findings of this study, the results of this study can serve a solid foundation in the suggestion provision in advancing the competitiveness in Taiwan.

### **IV. The hypotheses**

The factors in influencing the location specific selections include the R&D's human resource staff of the host countries, the development of the fundamental science, the environment of R&Ds, the market size, institution factor, the protected policies of the wisdom properties, the corporation R&Ds investing strategies,

and the types of the R&D units ( Ronstadt, 1978; Casson and Singh, 1993 ; Kuemmerle, 1999; Serapio and Dalton, 1999; Kumar, 2001 ). The aforementioned factors can be categorized into two types: the location-specific advantages of the host countries and the conditions of the corporations.

This study discovered that there are differences between the Taiwan and Vietnam no matter in the governmental roles and industrious structures, the financial systems and the performance of R&Ds. The difference in location-specific advantage has the determining effect on the location-specific selection of the manufactures. The difference between the performances of the R&Ds in the expected region will also have a determining effect on the R&D's location specific selections of the corporations.

Lastly, although the conclusion remains unknown regarding the corporations' budget involvement in R&Ds, the number of the research staff, and types of the industries towards R&D's location-specific selections. This study verified the result through the analysis. According the analysis provided earlier, this study drew the hypotheses and stated as follows:

Hypothesis 1.

Taiwanese corporations' R&D's location-specific selection is influenced by the different regional environmental performance in R&Ds. In order to test this hypothesis, this study used the "ratio of the budget in GDP", "the number of research staff per ten thousand people", "the number of authorizing pattern per ten thousand people" to be the three variables as variable analysis. The positive correlation of the aforementioned variables and location-specific selection of R&D are predicted.

Hypothesis 2:

Taiwanese corporations' location-specific selection is determined by the decision making process. In order to test this hypothesis, this study used the questionnaire methods to understand the factors for the corporations in deciding the location-specific selections. Those factors include "the domestic human resource", "domestic market size", "the domestic ability of corporations", "the domestic policy conditions", "the industrial cluster of the industries and competitiveness", and "the domestic knowledge flow and the ability in innovations". There is positive correlation between the aforementioned variables and the R&D's location-specific selections.

Hypothesis 3:

The Taiwanese corporations' location-specific selection is determined by the different types of the R&D units. Due to its function, each unit has difference location-specific considerations. Technology units usually located in the subsidiaries overseas. Global technology unit established their location not based on the location of the parent country nor the host country. The corporal technology unit mostly established in the parent country which in supporting the development of the core technologies of the strategic development of the parent industries.

## **V. Questionnaire design and sample data analysis**

## 1. Sampling population data analysis

In order to analyze the determining factors in influencing Taiwanese corporations and Vietnamese Corporations in R&D's location-specific selections, this study used Taiwanese top 500 corporations in 2011 as subjects. The sampling population is mainly metal raw material industries and manufacturers. There are 61 of them which are 13% of whole. Second type of subjects consists of 64 electronic industries which are 12.9% of all. The questionnaires were mailed out of the participants dating from Apr. 1<sup>st</sup> to May 10<sup>th</sup>, 2012. There were 116 returned questionnaires with the returning rate of 33.3%. There were 115 corporations with R&D establishment, 30 corporations without. In the returning samples, the top three corporations with R&D establishment are electronic industries (16 corporations, 13.42%), photo electricity (14 corporations, 12.12%), metal and raw materials and related products (11 corporations, 9.52%), and computer and computer-parts assembly industries (11 corporations, 9.52%). The top three corporations without R&D establishment are metal and raw material industries (12 corporation, 8.25%), textile industry (3corporations 2.06%) and electronic industries (2 corporations, 1.72%).

This indicated that the establishments of R&D units mostly are high-tech industries such as electronics and photo electricity industries. Within the subject corporation of this study, there are 42 corporations in tradition industries, with 36.3% of all. Therefore, the results of this study are not biased towards the high-tech industries. In addition, with the consideration that there could be more than two R&D establishments within the same corporation, and to exclude the idea that Taiwanese headquarter establishments of Taiwanese corporal R&D units, the questionnaires were handed out 158, facing the fact that there were only 126 corporations documented in this study.

## 2. Questionnaire Design

There is highly possible that the type of R&D department and the location-specific decision factor may play an important role in determining the location-specific sections. Therefore, it was incorporated into the questionnaires as question items. Because the differences in regional environment can be compared through the human resource of the region, the market size, the ability in manufacture, and the cluster of industries and the flow of knowledge. The corporations, when responding the question items related to the considering factors in R&D establishments, which contains the implicit meaning the comparison. As a result, the shortcomings of difficulties in transferring the aforementioned variables into qualitative variable analysis were redeemed. Other data contained information such as the basic information about the corporation, the number of R&D staff and the budget involved in the R&Ds.

The third type of subjects is the aerospace industry and entertainment manufactures consisting only one corporation. In the number of involving staff, there are 7900000 members which consist of 20.4% of the whole. Secondly, the computer and computer-related industries such as the part assembly industries, there are 590000 members participated which consisted 15.2% of all. Aerospace industry has the least participating rate, the 0.1% of all, with the 3181 participating members.

### 1. sampling data analysis

Within the 158 valid samples, there were 141 corporations selecting Taiwan as their R&D establishments, with 83.9%. There were only 54 corporations Vietnamese selections with 16.07% as whole.

## 2. Taiwanese and Vietnamese sample data analysis

To analyze data a step further, in the R&D types, Taiwanese R&D establishment are mostly within the technology R&D. There are 191 questionnaires, 56.86% of whole. Second type was R&D market related, there were 86 questionnaires, with 25.60%. Hence, there are mostly R&D transfers in applied technology R&D and market related R&Ds.

In location-specific decision factors, 170 questionnaire responded “domestic human resource” considered the key factor in determining the R&D establishments in Taiwan, which consisted of 50.60% of the valid samples, followed by the “domestic cluster industries and the industry competitiveness”, with 116 questionnaires, with the rate of 34.52%. The last and the least component was the “domestic market size with the least number of considered factors with 54 questionnaires, 16.06% of rate. Therefore, it is safe to postulate that Taiwanese corporations consider the human resources of Taiwan, the cluster of the industries and the industry competitiveness are the main factors in attracting the R&D establishments.

Regarding to the number of staff in R&Ds, the most majority of corporations selecting Taiwan as their R&D establishments, there were 60 questionnaires responded “10 staff members or less”, with rate of 17.86% of total valid samples. The least number of questionnaires responded “501 or plus staff members” with the rate of 6.25%. In Vietnamese R&D establishments, the most number of the R&D staff members, the majority of respondents are “11-20 staff members”, “50-100 staff members”, and 101-150 staff members” with 10 respondents respectively. Lastly, regarding the budget involved, within the sample in Taiwanese establishment selections, the majority of respondent clustered in “greater than 10000000, less than 50000000”. There were 12 questionnaires with the rate of 3.57% of the total sample. The minority respondents responded “less than 1000000”. There were only 1 respondent with the rate of 0.3% of the total sample. In Vietnamese R&D selections, the majority of respondent responded “greater than 5000000 to 10000000” and “greater than 10000000, less than 50000000”. There were 5 respondents from each category with the rate of 1.49%. There were 2 respondents responded that the item “greater than 1000000 to 5000000” was most selected with the total rate of 0.60%. Hence, comparing to Vietnamese selections, Taiwanese selections tend to involve more budget with the respondent of Taiwanese establishments.

According to the data drawn from the questionnaires, the R&D samples tend to cluster more in Taiwanese regions. With the limits of the questionnaire data, if tested with the various logistics variables, due to the different numbers of sample sizes between the two regions, the empirical data may elicit bias. In addition, Taiwan and Vietnam are two different types of political and economic institution. The main purpose of this study was to analyze the regional environment of Taiwan and Vietnam. The differences arise from influencing the determination of the R&D location-specific selections. Meanwhile, considered the different number in Taiwanese and Vietnamese sampling, the R&D location-specific selections were divided into Taiwan and Vietnam variables and later empirical testing were undergone. The results achieved the goal of comparing

regional environment of Taiwan and Vietnam. Regarding to the determining factor in influencing the location-specific selections was supplemented by the interview with the corporations.

## VI. Taiwanese and Vietnamese location-specific selections- the Establishment of behavioral modules and hypotheses verification

### 1. Empirical modules

As mentioned earlier, based on the response gained from the questionnaires, due the big difference in the number of sampling, lead to the biased result in various logistic variable testing. This study divided location-specific selections into “Taiwan” and “Vietnam” items. Under the circumstances of dependent variables, the data was analyzed through Logit model. Logit model based on the theoretical, and economic foundation that the consumer behavior of individuals selections. Individual selection model tend to be measured by the referent functions. When decision makers face with two or more options, they tend to use the maximization of the effectiveness model in decision making. This study used  $U_{i1}$  to for “the effectiveness of Taiwanese R&D establishment”. Also, the  $U_{i0}$  was used for “the effectiveness of Vietnamese R&D establishment”. The function was stated as follows:

$$U_{i1} = a_1 + b_1x_i + c_1z_i + \varepsilon_{i1} \dots\dots\dots ( 1 )$$

$$U_{i0} = a_0 + b_0x_i + c_0z_i + \varepsilon_{i0} \dots\dots\dots ( 2 )$$

Corporations only considered possible when the effectiveness of Taiwanese R&D establishments are greater than the effectiveness of Vietnamese R&D establishments. They are willing to selection Taiwan. The function was stated as follows:

$$P(U_{i1} > U_{i0})P(\varepsilon_{i1} - \varepsilon_{i0} > a_0 - a_1 + (b_0 - b_1)x_i + (c_0 - c_1)z_i) \dots\dots\dots ( 3 )$$

$$\log\left[\frac{p(y \leq j | x)}{1 - p(y \leq j | x)}\right] = a_j + b_1x_1 + b_2x_2 + \dots + b_kx_k \dots\dots\dots ( 4 )$$

Y describes the level of preference in R&D establishments in Taiwan.  $x_k$  describes the outside explanatory variables, the attributes of the corporations in terms of location-specific selections. Logit models involved the use of Method of Maximum Likelihood to measure the referent value. This method takes consistency and asymptotically efficiency and asymptotically normal into account ( Aldrich and Nelson, 1984 ). As a result, the biased can be eliminated. In order to achieved non-biased conditions, the requirement of this sampling should be average or above (n=100). When used in smaller samples, when n<100, the likelihood of biased arises. This study has fulfilled the requirement of this model. In model collation, Likelihood ration index or chi-square test methods were used. Therefore the explanatory value of collation was understood.

### 2. Variable analysis

This study stands in the location-specific perspective to analyze the key factors in determining Taiwanese corporations in R&D establishments. In selecting empirical variables, the data gained

through questionnaires relating to Taiwanese and Vietnamese regional environment were presented. The data were presented as tables shown.

## VII. Conclusions

This study used location-specific advantages to analyze the discrepancies in Vietnamese performance in R&Ds. Also, the determining factor in influencing Taiwanese corporations in location-specific selection was explored. With the soundness perspective, the regional advantages of Taiwan and Vietnam were also discussed. Therefore, the comparison of Taiwanese corporation and Vietnamese corporation was made, and the past researches that favored the high-tech industries were also eliminated. Through the empirical results, the key factors determining Taiwanese and Vietnamese corporations in terms of location specific selections include location-specific advantages, the types of R&Ds, domestic policy conditions such as knowledge flow and R&D budgets involved.

Regarding the variables in this study, there was a negative correlation between the “market type R&D units”, “domestic market size”. The rest of the variables are presented positive correlations. It indicated that due to the small Taiwanese market size elicits Taiwanese corporations to go to Vietnam to establish “Market R&D type”. The rest of factors indicated that Taiwan has more attraction towards those of Vietnam. This is also the factor attracts Taiwanese manufacturers to establish “Technological R&D models”.

According to the result of interview conducted by this study, there is a tendency of stable political environment, faultless policies in wisdom property protection and pattern protection, highly train staff in R&D department, and the less obstacles in technological interaction and communications. In addition, the governmental provision in terms of useful resources was utilized to build a sound environment for the corporations to engage in the innovations of R&Ds.

Based on the outside factors and the attempt in protecting the core technology, the avoidance of the leakage of the business secrets, Taiwanese corporations tend to establish their “technological R&Ds departments in Taiwan. The government must come up with ways in maintaining the advantages mentioned above in order to attract Taiwanese corporations, even foreign corporations to establish their R&D units in Taiwan. There are major differences in governmental roles, the industry structures, the financial systems and the performance on R&Ds between Taiwan and those of Vietnam. Despite the fact that Taiwanese population, areas in terms of size are smaller than those of Vietnam. In terms of performance of R&Ds, Taiwan presented an outstanding performance. This suggests that the regional R&D’s energy in Taiwan was undeniable.

Therefore, our government must realize the importance of R&D innovations. The development of core technology is the vital key in advancing Taiwanese competitiveness. As a result, the policy in encouraging domestic corporations to establish their R&D centers in Taiwan. The establishment of R&D centers not only has the effect on avoiding the risk of outflow of core technology but also has the effect on assisting the transformation of the corporations from R&D types to the development of resource- service integration type of corporations. This is also the factor for Taiwan to break through the current predicament, to shift the direction towards advancing the competitiveness of industries. According to the empirical results of this study,



there are almost 80% of Taiwanese corporations are willing to establish their “type of technological R&D” centers in Taiwan. The establishment of R&D centers in Taiwan not only attracts the global developing experience to Taiwan, but also has the effect on Taiwanese corporations overseas supported by the parent R&D innovations. Hence, the expansion of the corporations can be achieved. Therefore, it is very important to suggest government to keep encouraging corporations to establish R&D centers. Also, the government must take the domestic ability in assisting the advancement of the R&D centers. To encourage the cooperation of domestic corporations and foreign corporations, therefore, the opportunities of advancing domestic R&D centers can be increase. Therefore, Taiwanese corporation can take more part in global R&D’s network and to take part in the leading roles. Therefore, this trend of internalization of the R&Ds can be fulfilled. As a result, the Taiwanese corporations’ competitiveness can be strengthened.

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# The Control Illusion of Conditioned Superstition: Investigation on Re-inforcers

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## **Abstract**

Everyone desires to control everything, and hopes the results are as he/she wishes. For making the results as one wishes, lots of people bring their lucky charms with them, which is thought the chance of success will be improved and that is illusion of control. Besides the conditioned superstition associating with positive results, there is superstitious belief associating with negative results in our daily lives. The past literature evidences that objects associating with positive results affect individuals' expectation of performance, but seldom investigates on the objects associating with negative results. Thus, the study uses experimental design to investigate the impact of conditioned superstition associating with positive results and that with negative results on illusion of control. The results showed that re-inforcers can significantly influence the control illusion, that is, the control illusion for the positive re-inforcer treatment was significantly greater than that for the negative one.

**Keywords:** Operant Conditioning; Conditioned Superstition; Illusion of Control; Re-inforcer

# Employee's Job Standardization, Social Loafing and Group

## Cohesion in the Leisure Farm

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### Abstract

This study aims to explore the relationships among job standardization, social loafing, and group cohesion for leisure farm employees, as well as the significant influences of employee's job standardization, social loafing, and group cohesion on the management of leisure farms. Job standardization is utilized by the industry to improve employees' performance and reduce their inclination toward social loafing. However, would the job standardization really help the employer resolve the problem? Will group cohesion be affected in the long run if employees only pay attention to the work flow of their SOP and overlook their coworkers' needs for support? The research conducts the questionnaire survey to solve the research problem. The results of the survey reveal that there are correlations between the implementation of job standardization and the social loafing of employees. As the results show, the additional forces of standardization and group cohesion within a team would allow the employees to have a sense of belonging and of responsibility toward contributing to their team. The findings of this study are expected to help the industry plan its HR management strategy and to expand existing academic theories.

**Keywords:** Leisure Farm Employees, Job Standardization, Social loafing, Group Cohesion

### I Introduction

The importance of leisure farming has greatly increased with the development of the tourism industry. Leisure farms offer not only a natural environment, gardening, and planting, as well as the businesses of agriculture, forestry, fishing, and animal husbandry; also offer services to "people" as the target consumers. Employees have to comply with the rules and norms of the organization to meet the customers' needs; moreover, taking advantage of their skills and resources to take care of customers to achieve the goal of enhancing service quality and allowing the company to perform well and create business opportunities.

“Job standardization” is usually employed by industries to deal with the disparity of quality to maintain the consistency both services and stability of service quality. The current thinking in industries is that the more job standardization is emphasized, the fewer service skills-related problems employees will encounter when interact with customers. The goals of service for customer by company will be achieved while the employees follow the standard work flow.

Service evaluations made by customers who are the recipients of services would be based on staff performance of the services. It is therefore imperative for employees to display their service skills during the process of rendering services (Parasuraman, Zeithaml, and Berry, 1985, 1988). It has also been proven in past studies that job standardization facilitates the improvement of service quality (Hsieh and Hsieh, 2001; Hsieh, Chou, and Chen, 2002; Karatepe, Avei, and Arasli, 2004). The positive influences of job standardization would be worthy of further study if they also affected the performance of employees in the tourism industry (Liu, 2006).

The services of the leisure farm industry are equally as important as its environment, and have thus become the top criterion of quality service provision in the industry. People might ask how to improve the quality of service? Latane et al. (1979) suggested that individuals might loiter about due to the increased number of people in their group. A mutual willpower and force will be generated that binds team members together when they work hard to strive for goals as a group. This group force would be regarded as the sum of each member’s force to continue working as a team (Festinger, Schachter & Back, 1950). In light of leisure farm workers’ lower wage level, long working hours, inadequate job benefits, and limited opportunities for promotion, as well as the vast working area of the farms, the question arises, would employee social loafing be increased by these factors? Would group cohesion be further affected?

Our study attempts to utilize the significant attributes of the leisure farm industry to explore the relationships between job standardization, social loafing, and group cohesion based on the above research background. Would the inclination toward social loafing be reduced by job standardization? Would group cohesion be decreased by job standardization? These questions will be clarified by our study to make contributions to the industry, public sector, and academia.

## **II. Method**

According to the literature, job standardization refers to the extent to which all jobs are to be executed by the employees who follow standard procedures and use the software and hardware provided by their organizations (Hsieh et al., 2002; Hsieh and Hsieh, 2001). Job standardization can secure employee stability in the process of delivering services. It can allow both routine and non-routine jobs to be done through a set of standard procedures, and could also prevent employees from exhibiting inconsistent perspectives and behaviors during interactions (Zhang & Wu, 2014). In addition, job standardization can also provide employees with information regarding the vision and goals of the organization to increase their sense of job identity and satisfaction, as well as to help each other achieve the same competitive goals (Zhen, 2013). Social loafing can thus be avoided if an individual employee’s involvement is not reduced due to the presence of other employees. Group cohesion will also be enhanced since the employees can work together toward mutual competitive goals.

The following assumptions were made:

**Hypothesis 1:** there is a negative correlation between job standardization and the social loafing of service staff.

**Hypothesis 2:** there is a positive correlation between job standardization and the group cohesion of service staff.

**Hypothesis 3:** there is a negative correlation between group cohesion and the social loafing of service staff.

The study was implemented by randomly selecting employees at 20 leisure farms as samples to be given surveys and questionnaires in person at the farms. In total, 229 questionnaires were sent out and 194 of them were collected, with a response rate of 84.7%. After eliminating 39 invalid questionnaires which contained incomplete answers, there was a total of 155 valid questionnaires collected, with a valid response rate of 67.6%.

### III. Conclusions

#### Results

The SPSS software for Windows was used for statistical analysis. The methods of analysis included Reliability, Descriptive Statistics, and Correlation Analysis, etc.

**Table 1**

**Analysis Results for the Variables of Demographic Statistics**

	The Largest Group		Second Largest Group	
Gender	Female	69%	Male	31%
Age	Ages 20-29	49.7%	Ages 30-39	24.5%
Education	College Graduates	40.6%	S. High (Vocational) School Graduates	27.7%
Major in Tourism	Tourism Dept.	31%	Non-Tourism Dept.	69%
Marital Status	Single	68.4%	Married	28.4%
Job Division	Catering Division	36.8%	Customer Service Div.	27.1%
Job Position	Entry Level Worker (Service Staff or Admin. Assistant)	45.8%	Intern	20%
Total Seniority at Leisure Farm	Less than 1 Month	18.7%	1 and 2 Months	11.6%
Monthly Salary	NT\$20,000-29,999	50.3%	NT\$19,999 or below	40.6%

The survey samples collected from the leisure farm employees, 69% of respondents were female and 31% were male. The majority of the respondents, totaling 77 persons or 49.7% of the overall sampling, were 20-29 years old, while 38 respondents or 24.5% of the second largest group were 30-39 years old. A total of 63 or 40.6% of respondents were college graduates, while 69% of the overall sampling were not graduates of tourism-related departments. A majority constituting 68.4% of respondents were single. A majority of 57 respondents or 36.8% worked in the Catering Division; this was followed by 42 respondents or 27.1% working in the Customer Service Division, constituting the second largest group. 71 respondents were entry level workers (entry level service staff or administrative assistants), constituting a majority of 45.8%. In terms of total

seniority working in the leisure farm industry, the largest number, 29 respondents or 18.7% of the total, had worked less than one month, followed by 18 respondents or 11.6% having worked for one or two months. In terms of wage levels, a 78 respondent majority, or 50.3% of overall samples were paid between NT\$20,000-29,999.

According to Guieford (1965), any Cronbach's  $\alpha$  coefficient that is higher than 0.7 is regarded as highly reliable. The reliability acquired from the survey was between 0.79-0.89, which means a high correlation among all variables in the scale and the basic requirements for the internal consistency of the questionnaires being met. Validity analysis was based on KMO of Kaiser (1974) (Kiaser-Meyer-Olkinmeasure of sampling adequacy; KMO) that should be higher than 0.7 in order to proceed with factor analysis. The survey's validity analysis result was higher than 0.78, which met that requirement. As Table 2 shows, there were significant correlations among all coefficients of job standardization along with all its dimensions, social loafing, and group cohesion.

**Table 2**

**Correlation Analysis Between All Dimensions: Job Standardization, Social loafing, and Group Cohesion**

		Job Standardization	Acceptance	Attainment	Social loafing	Group Cohesion
Job Standardization	Pearson	1	.813**	.939**	-.393**	.398**
	Pearson Correlation Sig.(2-tailed)		.000	.000	.000	.000
Acceptance	Pearson	.813**	1	.564**	-.264**	.330**
	Pearson Correlation Sig.(2-tailed)	.000		.000	.001	.000
Attainment	Pearson	.939**	.564**	1	-.404**	.371**
	Pearson Correlation Sig.(2-tailed)	.000	.000		.000	.000
Social loafing	Pearson	-.393**	-.264**	-.404**	1	-.298**
	Pearson Correlation Sig.(2-tailed)	.000	.001	.000		.000
Group Cohesion	Pearson	.398**	.330**	.371**	-.298**	1
	Pearson Correlation Sig.(2-tailed)	.000	.000	.000	.000	

Note: \*\*p < 0.01, Correlation Sig. (2-tailed) \*p < 0.05, Correlation Sig. (2-tailed)

## Discussion

**The existing job standardization, social loafing, and group cohesion conditions for leisure farm employees in Taiwan.** In terms of job standardization, the service staff of leisure farms should indeed meet the requirements of the services they provide. However, their acceptance of the job standardization required by their companies is among the lowest. It indicates that job standardization is neither universally implemented in the

leisure farm industry, nor is it well-executed even when most of the employees have complied with the rules of the company.

In addition, the answers of leisure farm service staff putting the greatest effort into maintaining public areas occupied the first place among all questions, meaning that not all the staff would do their best to maintain public areas. The answer of “I would not take on sharing the workload with other colleagues at work” appearing less indicates a lower extent of collaboration in the group, even if there is also a lower extent of social loafing among the employees.

In terms of social loafing, despite good interpersonal relations among service staff, some of them possess different standpoints. However, it is proven that the majority has a higher acceptance for their team in comparison to the first question of “The members of our team are getting along well.”

**Correlations among job standardization, social loafing, and group cohesion for leisure farm employees in Taiwan.** The results of the survey reveal that there are correlations between the implementation of job standardization and the social loafing of employees. It implies that job standardization at leisure farms allows employees to have standards to follow while working. The more detailed the job standardization is and the more precise the employees’ job assignments and duties are, the fewer opportunities employees will have to loiter. If the staff is highly aware of their job assignments and there is support and collaboration among coworkers, work would proceed smoothly while tourists at the farms have a wonderful recreational experience. Employees would see themselves as part of the group and help each other with completing daily routines, which would also result in less selfish behavior at work. The cohesion between group members would not affect the operation of the organization. Therefore, the situation of social loafing would actually be reduced instead of increasing. As the results show, the additional forces of standardization and group cohesion within a team would allow the employees to have a sense of belonging and of responsibility toward contributing to their team. Furthermore, it would also make them concentrate on their duties without being distracted by other emotions.

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# How do Monetary Policy Surprises Affect U.S. Stock Returns at the Zero Lower Bound?

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## Abstract

This paper uses firm-level data covering the period from November 2008 to September 2011 to examine the impact of monetary policy surprises on U.S. stock returns at the zero lower bound and during days when LSAP (Large-Scale Asset Purchases) were announced. We also measure the surprise component of monetary announcements constructed by Wright (2012).

The empirical findings suggest that the monetary policy surprises during the days when LSAP were announced boosted the stock returns through the bank funding channel. Significant evidence is provided for the statistical difference between the impact of positive and negative monetary policy surprises on stock returns during the days when LSAP were announced. The returns of capital-intensive firms in the construction and finance industry were strongly impacted by the monetary policy surprises, and firms in the services and retail trade were also strongly impacted through the wealth effects. The impact of the monetary policy surprises on stock returns during the first round of the LSAP announcements was positive and statistically significant. However, the impact during the second round of LSAP announcements and the launching of the maturity extension program was insignificant.

It is found that a positive monetary surprise has a greater impact on the stock returns of financially unconstrained firms compared to financially constrained firms during LSAP announcements, and the difference is statistically significant. This indicates that the positive impact of an expansionary monetary surprise during the days when LSAP were announced is further magnified in a firm with a debt rating or a cash dividend payout.

**Keywords:** Zero Lower Bound, Monetary Policy Surprises, Stock Returns, LSAP, Financial Constraint

# The Advantages of Dynamic System in Foreign Direct Investment

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## Abstract

What is it to determine the choice of foreign direct investment (FDI)? This is the core issue for the international management policy and practical theory. With the funds, technology, which are followed by FDI, those bring jobs and lead to a great of wealth. While economic growth increasingly depends on the dynamic development of complex and precision Institutional. These Institutional are required to deal with uncertainty in a dynamic substance and human beings' environment. Therefore, the export-oriented countries will be formed in the global structure, processing manufacturing, marketing and R & D which locate in the other two different distances form a triangular relationship. In this study, through the dynamic theory analyzes the industry data of the overseas investment upon the manufacturing over the past decade in Taiwan to explain this phenomenon and its effect on the efficiency of enterprises.

## I. Introduction

The companies which are lack of domestic demand and rely on exporting countries survive on investing overseas only. What are the considerations on the company's overseas investment? The pursuit of lower production costs, which the host-country provides some incentives and concessions like cheap land, tax, labor and so on. The pursuit of lower logistics costs. Using of the region with natural resources nicely. Pursuing the key of the

technic and marketing dominance. So when the company assess its investment district and location, the more complex and precision Institutional need considering. These Institutional are needed to process the uncertainty within a dynamic substance of the environment ( Cantwell , H Dunning & H Dunning , 2010 ). Therefore, it will establish a dynamic framework of an enterprise, which the use of inexpensive, lower labor from the low development of national and land costs in manufacturing and also used in investing the high development of country with a free trade agreement (FTA), obtain R & D technology and market. The company chose policy and Institutional self-interest of the host country, but with the same purpose as the concept of globalization in different region to invest, which forms a triangular relationship invisibly and becomes a triangle area that runs the largest market for the company's operating. And then it forms a strong barrier for integration of resources among each other.

In this study, summarized the statistics of the overseas investment in manufacturing firms nearly a decade in Taiwan. Initially estimating there is a positive relationship between the will of a foreign direct investment and the internal policies and Institutional in their host companies. The company considers maintaining competition under the transaction cost. It will pursue the largest efficiency in adjusting constantly for the foreign direct investment policies which faces the market changes among the manufacturing, marketing and R & D.

Dynamic foreign direct investment help the companies understand the characteristics of the market environment changes. In the era of the accelerated technological innovation, the globalization of the economic and international markets and the variety of customer needs, which find the optimal location and the most competitive advantage. The triangular area jointed closely forms the complementary assets of the company.

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# Facilitation of Intergroup Communication Skills with the Help of Mobile Applications

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## Abstract

Misleading information can cost money and time for organizations. Usually, problems arise from undeveloped, unshared and scattered information. Mobile applications enable users to enter, develop and share information from any locations on compatible devices. Mobile applications facilitate quick and easy access to information. The purpose of this research is to investigate the effects of selected mobile applications on the intergroup communication in organizations. Thus, the features of mobile applications can be analyzed about how they facilitate intergroup communication skills at organizations. In this study, several android-based mobile applications are selected based on their similarities and popularity. A survey was administered to a variety of end users. A rubric was created to review the extent to which these selected applications enhances overall communication skills at organizations. The results and recommendations of this study are presented in order to determine the best practices for intergroup communication skills.

**Keywords:** Intergroup relations, organizations, communications skills, mobile knowledge sharing

## I. Introduction

Group and intergroup relations have become an important concept for the discipline of social psychology, conflict resolution and group decision making (Singh, 2010). Intergroup relations are the ones that are influenced by the social identities and perceptions of groups. Thus, intergroup relations are becoming more of a problem for organizations. It is also believed that the quality of intergroup relations show the characteristic of the organization. As population increases along with technological advancements and economic volatility, the nature relation between group members may be unsteady.

There are many groups in organizations. Some of these groups are connected to each other naturally because they need to exchange information as a part of their job (Natemeyer & Hersey, 2011). The way of researchers are defining group and the characteristics they understand has been a matter of debate for many years. In a famous piece Kurt Lewin (1997) noted, *“it is not similarity or dissimilarity of individuals that constitutes a group, but*

*interdependence of fate*". In literature, there are two types of groups available in organizations; formal and informal groups. A formal group is created by an organization or a company to achieve objectives laid down in the organization goals. Informal groups always arise if an opportunity exists and they consist of a small number of people participate in routine daily activities (Natemeyer & Hersey, 2011). Informal groups in organizations increase dependent on workers that directly reflects into higher productivity levels. The intense communication between formal and/or informal groups can have both positive and negative impacts.

A major issue in intergroup communication which exists for decades is the distinction between in-group and out-group members. Individual differences not only flavor reactions to out-groups, they are also central to the development of in-group attachments. Identities based on religion, ethnicity, or class are increasingly a matter of choice in modern society (Pettigrew, 2010). In today's business world, one of the main problem for intergroup relations is the social categorization. Social categorization describes a kind organization used by people to remember social interactions (Ariyanto & Hornsey, & Gallois , 2009). As a human being, we come in contact with many people of different colors, sizes, genders and cultures. However, it also creates several social problems including such as discrimination, racism, and more importantly stereotyping (Huddy, 2001). However, when intergroup relations are harmonious; members of different groups will be less sensitive about the distinctions between in-groups and out-groups. When there is a conflict, identification with one's group becomes stronger, out-group differences can become more obvious where intergroup conflict increases. The conflict can be countered by having strong communication between in and out groups.

Major companies consist of different departments for different servings, but aiming for the same target. Each department is unique and carries its own individual plans and goals that are driven by a group. Group members are selected based on their knowledge and abilities as well as the communication skills. Miscommunication usually occurs when there is no correlation between what is being said and what is heard or seen. The lack of communication is a major issue for organizations, other than the distinction between in group and out group members. Companies lose millions of dollars when a connection between individuals or units within the same organization is lost. There are five fundamental causes for intergroup miscommunication; complex messages, withheld information, hierarchy and ineffective communication skills, lack of trust, and language barriers:

**Complex messages:** They can be written or verbal. In organizations, it is important use a common language that everybody can understand. A typical organization consists of diverse departments, thus some technical terms may be completely foreign to other departments under the same organization.

**Withholding information:** Because of privacy issues at organizations, important information may be kept confidential. As they are hidden from public access, they should be also available to those in the company who want to access to the information whenever and wherever needed. Major companies such as Honda Motor Company uses a common database for its employees to obtain valuable data and information. Each selected worker uses his or her employee number to access the database in order to pull the needed information without taking time off other employees. This enhances productivity and improve intergroup communication skills.

**Hierarchy and ineffective communication skills:** Hierarchy is one of the obstacles in intergroup communication skills. Increased hierarchical levels often cause miscommunication. Knowledge transfer process, from top to bottom levels in an organizational structure, must pass from certain stages in order to reach its destination (Krogh, 1998). In order to be effective and successful, managers should keep employees informed all the time. Reducing hierarchical levels would help organizations to build better communication skills and increase the pace of knowledge transfer

**Lack of trust:** Competition is the key element that induces lack of trust in intergroup relationships. Many employees in retail and sales work based on salary and bonuses from sales and promotions. In these fields, knowledge sharing is minimized due to competition between salespeople. It is important to keep coworkers, employees accountable in decision making process so that intergroup interaction and communication can increase.

**Language barriers:** Language barrier is a crucial factor in business and intergroup communication. Organizations consist of different people from different parts of the world. Companies hire people based on personal skills as well as technical knowledge and ability to perform a job. Good communication skill in terms of speaking a native language is also required, but not a primary factor when recruitment occurs for the position that requires more technical knowledge than practical knowledge which is only to be absorbed and imparted. Although face to face interactions are highly suggested, using written reports, graphics can eliminate some language barriers at organizations.

The common problem, lack of communication, of all these causes arose from unshared and undeveloped information. These issues exist for companies, small and large. Many companies look for alternative ways to build an intergroup communication culture by utilizing from latest technological platforms such as hardware and software. Even though the term of technology is known to brake communication bonds among individuals, it may become very useful for organizational use (Derballa & Pousttchi, 2004).

## II. The Effect of Smartphone and Operating Systems on Intergroup Communication

Many other factors can cause miscommunication that can cost money and time for an organization. Thanks to the rapid development of technology, sharing knowledge is quicker and more efficient nowadays. Advanced hardware and software tools are used to facilitate the transformation of information from one unit to another one. Ideally, smartphones are very convenient for sharing knowledge regardless of distance and time. According to official numbers from Business Insider's subscription research service, one in the every five people in the world own a smartphone that is equipped with advanced computing capability and connectivity. Researches show that more people in industry are tending to own Smartphones. The Forrester Research Company calculated that approximately 350 million employees will own smartphones as of 2016 (Chen, 2012).

There is no doubt that the smartphone market is growing irrepressibly. Intense competition force manufacturers to offer the best products at reasonable prices. Operating systems behind smartphones such as android

and IOS show incremental progress. Open source codes enable users to edit and develop mobile applications that serve for various purposes.

Today's manufacturing facilities carry advanced multitask robots to replace labor force in order to save time and increase productivity. They are also taking place to perform the jobs that human beings cannot execute. The bottom line is that technological devices and their operating systems can cure the existing problems in intergroup relations.

In this research, several android applications are selected based on their functionalities and effectiveness on intergroup communication. The research question is "*to analyze features of mobile applications (in android platform) and how they facilitate intergroup communications skills at organizations*". A rubric was developed to analyze the extent to which these applications improves overall communication skills and eliminate some of the challenges, five fundamental causes for miscommunication. The results of this preliminary study are presented. Results of this study will be valuable to those companies seeking to use mobile applications as part of their technical and practical communication strategy.

### III. Corresponding Survey and Rubrics

Four android applications, *Google drive, Drop box, Evernote, SkyDrive*, are chosen based upon discussed criteria. We have determined that all these four mobile applications can facilitate intergroup communication skills as they are loaded with certain features. They are not limited to but include common points of Knowledge Acquisition, Preservation, Development, Distribution/Sharing. We are more interested in the distribution/sharing and development/editing part of the model as they have the most impact on intergroup communication skills in organizations based on literature reviews and personal observations.

44 people (31 male, 13 female) participated in our rubric survey. The selection was random among college students who aged from 20 to 22. The participants used an android compatible device, smartphone or tablet, and given 5 days to complete the rubrics. The rubrics seek for certain answers as well as personal opinions about specific features of the applications. In brief, we asked students to focus on what they are examining on applications rather than the written features that can be easily found online.

### IV. Rubrics Results and Recommendations

The desired features of each phase are listed in the rubrics. All these features such as events tracking, simultaneous document editing/tagging facilitate intergroup communication in a manner that traditional face to face approach fails. The features on each phase is selected basen on user's ranks and preferences subject to given list of options that are choosen to partly cure for the mentioned five fundamental causes . Please note that the specified features of each rubric can vary depending on what a certain organization is facing with.

Document editing/tagging (table 1) is an important step of our four phase model. One key feature is to edit somebody else's file and share it with coworkers and colleagues when needed. This feature is more appropriate to organizations that have field engineers at different locations. It will enable the instant decision making with more accurate outcome.



**Table 1:** Development/Editing

Outcome Rubric: <b>Development/Editing</b>								
				Google Drive	Dropbox	Evernote	SkyDrive	
CATEGORY	3-Best Choice	2-Acceptable	1-Below Expectations	Score	Score	Score	Score	
Events tracking	The user is notified with an active alarm when an event day approaches, instant event tracking on homepage.	The user is notified with an active alarm when an event day approaches. No instant event tracking on homepage.	The user is notified when an event day approaches. No alarm or instant event tracking on homepage.	2.8	2.9	2.9	2.8	
Simultaneous document editing/tagging	The user can edit documents simultaneously on different devices from multiple locations.	The user can edit documents simultaneously on different devices from a common location (Same IP).	No simultaneous document editing is allowed.	2.5	2.4	2.8	2.7	
Adding audio and video files to existing notes	Recording video or audio interfaces exist on the app. The user can add or tag or remove audio and video files to/from existing notes	Recording video or audio interfaces exist on the app, no audio files are allowed. The user can add or tag or remove video and audio files to/from existing notes	No video or audio interfaces exist on the app. The user may add files from the “gallery/files” section of their devices.	2.4	2.5	2.4	2.5	
Supported formats/apps	The app is compatible with other apps and receive frequent updates	The app is compatible with other apps. No frequent updates	The app is not compatible with other apps	2.8	2.7	2.6	2.7	
				Total Points:	10.5	10.5	10.7	10.7

In the development/editing phase of the rubrics (table 1), the average scores are close to each other in most elements. This clearly shows that all four apps carry similar characteristics and offer comparable features. Evernote and SkyDrive are the most preferred applications of this phase. Both are leading in events tracking and simultaneous

document editing whereas Google drive and Dropbox stay behind their competitors in these areas. The user must be able to keep track of past and future events and edit them when needed.

Knowledge sharing/distribution (table 2) is lacking in intergroup relations as stated before. Sharing methods is the initial step of this phase. The user may want to share information on more than one platform. This can be done by performing by simultaneous distribution. Information can be private to some institutions and individuals, thus appropriate settings must be done to increase the level of privacy at organization.

**Table 2:** Knowledge sharing/distribution

Outcome Rubric: <b>Distribution/Sharing</b>							
				Google Drive	Dropbox	Evernote	SkyDrive
CATEGORY	3-Best Choice	2-Acceptable	1-Below Expectations	Score	Score	Score	Score
Sharing methods	Sync with web. The user can share/distribute the files(as a file or a web link) to facebook, twitter and other applicable storage accounts	Sync with web. The user can share/distribute the files to facebook, twitter and other applicable storage account. The user may only store files (cannot create a web link for files) to online storage accounts	The user may not share/distribute the files and web links to facebook, twitter and other accounts	2.6	2.7	2.7	2.5
Sharing limits	Data sharing is unlimited	Data sharing is limited to certain amount of data.	Data sharing is limited to daily use.	2.4	2.7	2.6	2.6
Sharing privacy	The user may adjust privacy settings in file sharing such as adding/removing multiple users, restricting information to unauthorized individuals	The user may adjust privacy settings only extend to adding/removing multiple users. No restriction of information to unauthorized individuals	Privacy settings do not exist.	2.4	2.7	2.5	2.6
			Total Points:	7.4	8.1	7.8	7.7

In development/editing phase, the user must be able to share and distribute links (table 2) if necessary. Sharing methods vary depending on the type, size and load of the file. All four apps satisfy the needs of sharing methods. They are all compatible with major networking services such as Facebook and Twitter. However, the user can not

share some formats such as voice and other documents with different formats. This creates an issue when it comes to sharing files. The participants think that distribution and sharing methods phase address individuals rather than professionals who work for larger organizations. Dropbox is the best application in this phase our rubrics.

To sum up, selected android applications can facilitate intergroup relations and communication by fully implementing the desired features of each phase of our model. These features may vary depending on miscommunication types in organizations. Since most of these android applications are open sourced, they can be edited, developed and personalized to a specific company.

## V. Conclusion

Knowledge transfer should be made in a way that it can be efficient as well as productive for organizations. Knowledge development and sharing are an emerging areas in all industry fields. In spite of the fact that there are certain advantages of using smartphones and portable communication devices at work, disadvantages are certainly inevitable. Smartphones in the workplaces could reduce productivity and more dangerously disconnect people from their real lives thus bringing more stress to their lives which eventually creates bad atmosphere in an organization.

The level of competition is high in today's market because consumers have variety of options to choose from when a purchasing decision is made. For example: In retail and manufacturing industry, computerized inventory systems offer instant assessment of inventory levels, because the time is equal to money. In order to survive and be powerful in today's industry, companies must be able to make instant decisions on spot, and technology itself is the main key to unlock opportunities for next generations.

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# **The Influences of Service Experience Engineering and Service Innovation Dynamic Capability on Service Innovation Performance**

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## **Abstract**

Facing the rapid changing business environment, the primary mission of sustainable enterprise is innovation. Many enterprises increasingly attach importance to the development of innovative services, so that they can provide differentiated services and stay competitive. The service development worker will put more efforts on the development of service oriented. In the research and development process, how to make the customer and staff are satisfied by the new service, and let a new service be on the market efficiently will be a very important issue. Service experience engineering method (S.E.E.) provides an effective tool in innovation policy and application services. In order to achieve the resource complementarity, enterprises use dynamic capability to engage the innovation. Service experience engineering not only achieves the economies of scale and scope but overcomes the entry barriers from these observations. Dynamic capability of innovation services enhances the competitiveness which increases the industry barriers of enterprises. In this research, we want to discuss the influence of service experience engineering on service innovation dynamic capability. We also discuss the influence of service innovation dynamic capability on service innovation performance.

**Keywords:** Service Experience Engineering, Service Innovation, Dynamic Capability

# Intellectual Capital and Corporate Governance

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## Abstract

In spite of the substantial empirical literature on intellectual capital, only a few research studies show the inconsistent results regarding the relationship between intellectual capital and organizational effectiveness (e.g. Hitt et al., 2001; Lin & Wei, 2006; Pennings et al., 1998; Vishns & Gupta, 2014). This necessitates a further examination of the real relationship between the two. In addition, studies exploring the catalytic role of intellectual capital on the benefit of corporate governance are rare. In this study, I develop a cross-discipline model to investigate the mediating and moderating roles of intellectual capital on the relationship between corporate governance and firm performance. Such a cross-discipline approach can lead to a better understanding of the value of managerial practices.

According to the resource-based view, a board's CEO experience, board rewards, board diversity, and board tenure can reflect board human capital (Johnson et al., 2013) and help board members to recognize organizational needs, hire a qualified CEO, and build up an optimal supervision mechanism (Tian et al., 2011). This is stated in hypothesis 1: a board's human capital will moderate the relationship between corporate governance and organizational effectiveness. The greater the board's human capital, the stronger its influence on corporate governance.

Corporate governance helps to reduce agency problems and information asymmetry. That will turn into a good company signal, which can attract talented job applicants and motivate existing employees to work harder, leading to greater organizational effectiveness. Thus, the second hypothesis is as follows: Human capital will mediate the relationship between corporate governance and organizational effectiveness.

The persons a board hires to top management positions will create the unique organizational culture and administrative procedure, which affect organizational effectiveness. Thus, hypothesis 3 is stated as follows: Organizational capital will mediate the relationship between corporate governance and organizational effectiveness.

Better corporate governance can win the confidence of outsiders and enhance a company's image, which can help to improve the organizational effectiveness. Thus, hypothesis 4 is stated as follows: Relational capital will mediate the relationship between corporate governance and organizational effectiveness.

A wide range of data was collected from various sources to obtain robust proxy variables, maximize the research sample and industrial diversity, and increase the generalizability of the findings. Data sources include a questionnaire-based survey, the department of statistics in the Ministry of Economic Affairs, the Taiwan Economic Journal (TEJ) Data Bank, the Directorate-General of Budget, and the CEO Directory of Taiwan.

The data covers 430 firms from 15 industries. The results of this study support hypotheses 1 and 2, but not hypotheses 3 and 4. Specifically, the research findings indicate that corporate governance can build up and attract more and better resources, which help organizations adjust to changing external environments and improve firm performance. In an era when intangible assets are assuming an increasingly important role in building organizational competitiveness, this study provides a different perspective, which could open a new research stream in a well-developed research field.

**Keywords:** Intellectual Capital, Corporate Governance, Human Capital, Organizational capital, Relational capital

# A Study of Behavior Impact from Mobile Phones between High School Students

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## Abstract

1997 the telecommunications release the restrict in private sectors, the mobile phone (referred to as the “phone”) have become popular. Especially the advent of smart phones, people demand for mobile Internet generally, However, students in youth improper excessive of mobile phones has caused a lot of impact, this issue deserves a probe to arouse the public’s attention and concern.

In this study, using a questionnaire for the junior high school students, Kaohsiung Gunsan district junior high school students as an object random sampling.

The statistical analysis of information obtained, is by means of descriptive statistics, chi-square test, T test and ANOVA analysis, the conclusions are as follows:

- (1) There are 76% of the students possess mobile phones, nearly 70% of them hold the mobiles since in primary school. Among them the middle and post-ranked classes more holders than the front ranked classes.
- (2) The majority (approximately eighty percent) of the mobile phone holders using smart phones, students ranked in the middle and the post section using smart phones more than front section.
- (3) The worse score, the higher proportion of use of mobile phones in school, but also higher ratio confiscation by teachers.
- (4) The frequently use mobile affect academic performance.
- (5) The students main call object with friends may be more outgoing, For the sack of using the phone, leading to late sleep, cause health burden and emotional vibration.
- (6) Students with mobiles convenient to contact with family and, easily to feel the care of others.

Based on above results, this study presents recommendations to the relevant coaching staff and parents as a reference.

**Keywords:** Junior high school student, mobile phone using behavior, smart phone

## **Graduate Employability: The Employers' Point of View**

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### **Abstract**

There is a growing awareness in Hong Kong of the importance of higher education and rapid changes have been taken in its education system, particularly, in the promotion of lifelong education and the introduction of the Qualifications Framework (QF) (Hong Kong Qualifications Framework, 2014). Educational institutions are increasingly focused on competency-based training, like work-integrated learning, in order to equip new graduates with the required employability skills to function effectively in the contemporary work environment. Indeed, questions have been raised on the quality of the graduate labour market and the ability of graduates to meet the needs of employers. Based on a qualitative study, this paper analyzes the employers' perspective of graduate employability in Hong Kong. Utilizing semi-structured interview techniques, twelve people representing different organizations were interviewed. Content analysis was adopted to identify graduate recruitment issues; perceptions of and organizational links with higher education; key business skills and competencies expected of graduates; and interpersonal and communication skills of graduates. Results indicated that employers were generally satisfied with the overall performance of graduates but they commented that graduates should improve on their language abilities; interpersonal and management skills; be more open to criticism and advice from colleagues; have more common sense and knowledge of current affairs; and improvements in work attitude in terms of more willingness to take responsibilities, being more enthusiastic about their work, and take more initiative at work. In view of this, the implications for academic and professional practitioners were discussed.

**Keywords:** employability, graduate skills, development



# A Questionnaire on the Development of Green Transportation Acceptance

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## Abstract

Recently, because of global warming and climate change impacting the environment, carbon emissions and other green issues have become the focus of governments, companies, and universities around the world. Many universities began to promote green transportation; however, we found little research focused on users' acceptance and attitudes regarding green transportation. In this study, we used the campus of Tunghai University as our closed experimental field; it has a huge campus (approximately 134 hectares) consisting of two sub-campuses at two ends of a mountain. The difficult traffic communication between the two sub-campuses makes it a perfect experimental field. We developed a questionnaire that the constructs are based on the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB) to understand the users' acceptance and attitudes of green transportation. The survey results provide a green marketing model which is more effective than traditional marketing.

**Keywords:** Green Transportation, Questionnaire Development, Factor Analysis, Reliability Analysis

## **Tours Guided's Satisfaction is Mediator to Tourism Motivation and Willingness**

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### **Abstract**

Tourism motivation and revisit the relationship between willingness - to navigate as the intermediary results, previous studies focused on the willingness to revisit the pre-factors and causality, and this study suggests that the will be subject to re-visit tourist motivation and satisfaction of navigation interference. In this study, Taiwan's most popular attractions for the study, paid out 320 questionnaires, regression analysis and verification intermediary effect. The result is expected to support our hypothesis. In addition, the study confirmed that tourism motivation and willingness to revisit positively correlated, ie a non-tour officers will strengthen tourism motivation positive relationship with the wishes of higher revisit Tour staff will strengthen tourism motivation and willingness to revisit. Finally, according to study results, the follow-up practical proposals.

**Keywords:** Tours guided'\* Tourism motivation\*

## Innovation as Affordance-Responsiveness

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### **Abstract**

Innovative action has often been the preserve of the mind and the outcome of cognitive processing. In this regard, the material context within which innovative action occurs is considered merely as existing only to the extent it becomes an object of interpretation, a carrier of meaning or of knowledge. The present suggests an embodied perspective that considers innovative action as unreflective responsiveness to environmental calls for action, or affordances. Affordances are understood as a relational to the perceptual skills of the agent and as resources available in the socio-material practices in which the agent is immersed. This understanding of innovative action in terms of affordances has several theoretical and practical implications.

**Keywords:** Innovative action, embodiment, unreflective skilful coping mode, affordance-responsiveness, socio-material practices

# Antecedents of Supplier Embeddedness in New Product Development

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## Abstract

The keen competition in today's global market drives enterprises to launch highly innovative products much more quickly. Consequently, the critical success factors behind the development of successful innovative products must be investigated. To enhance product innovativeness and performance, many enterprises rely on their suppliers to support their new product development (NPD). By collaborating with suppliers, enterprises can focus more on their own core competencies and leverage their resources more properly. Previous studies on product innovation highlight the importance of enhancing the product development capability of enterprises by accessing external knowledge from other enterprises. Some studies consider suppliers are the most important sources of external knowledge. Previous studies have covered different means to achieve better supplier collaboration, such as supplier involvement, embeddedness, and integration. However, the antecedent of supplier integration in NPD in terms of knowledge management (KM) and new product development capability (NPDC) is not yet supported with strong empirical evidence.

The traditional way of selecting suppliers by cost, quality, and delivery (CQD) is inadequate in today's highly competitive global market. Aside from the conventional technological, R&D, manufacturing, and financial capabilities of suppliers, enterprises are trying to select and collaborate with suppliers who have strong knowledge and product development capabilities. However, studies on knowledge and product development capabilities as antecedents to embed suppliers in NPD remain rare and lack empirical evidence. Therefore, this study investigates the role of the suppliers' knowledge management capability (KMC) and NPDC as antecedents of supplier embeddedness in NPD by conducting a large-scale empirical survey with more than 210 enterprisers in the Pearl River Delta (PRD) of Southern China.

The structural equation modelling analysis reveals that enterprises can enhance their competence in NPD through their proper integration with embedded suppliers who have strong KMC and NPDC. This finding supplements the extant literature and emphasizes the importance of KMC and NPDC as the critical success factors for embedding suppliers in NPD. Moreover, aside from the conventional approach of selecting and embedding suppliers on CQD, the KMC and NPDC of suppliers are also crucial to the success of NPD. This finding supplements the conventional CQD approach in supplier selection.

**Keywords:** knowledge management, new product development, supply chain integration

## I. Introduction

Supply chain management promotes inter-organizational collaboration in new product development (NPD) and suggests that enterprises cannot survive in today's market by working on their own. These enterprises must exert additional efforts to obtain knowledge and technical knowhow from various interdependent fields (Galbraith & Kazanjian, 1988). They need to engage further in joint product development (JPD) with their suppliers (Petersen, Handfield, & Ragatz, 2005).

Enterprises adopt a wide range of criteria in selecting their suppliers, such as their service quality, financial stability, and organizational culture (O'Toole & Donaldson, 2002). The cost, quality, and delivery (CQD) approach (Ghodsypour & O'Brien, 1998) is the most commonly used method in supplier selection. Some studies suggest that establishing long-term relationships with few suppliers who have strong knowledge management capability (KMC) and new product development capability (NPDC) can enhance joint NPD and prevent enterprises from being committed to incapable suppliers. However, those studies that reveal KMC and NPDC as antecedents of supply chain integration in NPD mostly lack empirical evidence.

In this empirical study, the supplier selections that use KMC and NPDC as antecedents are tested by engaging enterprises in different types of innovative activities in NPD to understand how supplier KMC and NPDC affect supplier selection and embeddedness in NPD.

## II. Literature review

### 2.1 Antecedents of supplier selection in NPD

Rapid technological innovations have shortened product life cycles, whereas market globalization has renewed the executive focus on NPD processes. Suppliers increasingly become vital resources for enterprises in a modern and highly competitive environment. Enterprises must dispose of their existing supplier base to identify the right suppliers with the knowledge and capability to participate in NPD (K. C. Tan, 2001), thus enabling the former to gain access to the invaluable resources of the latter.

#### 2.1.1 Supplier selection based on KMC as an antecedent

Previous studies identify supply chain integration activities as important contributors to the success of an enterprise. Supply chain integration has been broadly defined as the extent to which an enterprise is strategically interconnected and aligned with its supply chain partners. Integration with suppliers enables a smooth and efficient product flow through the supply chain and provides enterprises with access to resources and capabilities of their supply chain partners, which are otherwise costly to develop internally.

The literature identifies three important constructs in the formation of KMC, namely, learning progression, use of existing knowledge, and organizational memory. Learning progression refers to the extent to which a firm continually increases its stock of supply chain knowledge (Grant, 1996; Hurley & Hult, 1998). Use of existing knowledge refers to the extent to which the established knowledge that is possessed by the firm guides the activities and decisions in the supply chain (Deshpandé & Zaltman, 1984). Memory refers to the achieved level of knowledge, experience, and familiarity with supply chain operations as well as represents supply chain learning upon which future actions are based (Moorman & Miner, 1997).

Given the nature of supply chains, these three phenomena assume cross-functional roles in the intra-organizational settings of firms and become parts of the structural chain (Uzzi, 1997).

### **2.1.2 Supplier selection based on supplier NPDC**

Supplier selection based on NPDC affects the extent to which suppliers participate in product development activities. NPD is knowledge-intensive work that creates successful new products by linking upstream supply chain activities with downstream activities (e.g., manufacturing system design, operations, and supply chain management) (Cooper, 1999; Petersen, Handfield, & Ragatz, 2003). Successful product development requires the proper integration of these activities to create a collaborative environment that facilitates information exchange and shared decision making (X. Koufteros, Vonderembse, & Doll, 2001; X. A. Koufteros, Vonderembse, & Doll, 2002).

## **2.2 Supplier integration in NPD**

Enterprises collaborate with suppliers that provide KMC and NPDC to take advantage of the latter's competencies and eliminate the inherent risks that are associated with their partnership with incapable suppliers. Conversely, suppliers must assure a stable relationship and sufficient business opportunities with their partner enterprises before proceeding with the collaboration (X. Koufteros, Vonderembse, & Jayaram, 2005; C. L. Tan & Tracey, 2007).

By building relational embeddedness from mutually perceived trustworthy interactions, enterprises and suppliers rely on each other despite the potential for opportunistic behavior (Handfield & Bechtel, 2002). Inter-enterprise relational embeddedness can be shaped by trust, which Lawson, Tyler, and Cousins (2008) characterize as a range of integration activities that reflect close working practices between enterprises and suppliers. Embeddedness with supplier (ES) advocates a collaborative or relational exchange between enterprises that are committed to work together, aiming toward mutual benefits (Chen & Paulraj, 2004), and sharing risks and rewards (Shin, Collier, & Wilson, 2000). Therefore, ES in NPD has a mediating effect on the antecedent of supplier selection in KMC and NPDC as well as on product innovation performance.

## **2.3 Product innovation performance**

Product innovation refers to the capability of organizations to introduce new products and features (X. A. Koufteros, Edwin Cheng, & Lai, 2007). Product newness is one of the most commonly adopted definitions for product innovation (Danneels & Kleinschmidt, 2001; Schmidt & Calantone, 1998) and can be operationalized as newness to the enterprise, newness to the customer, and newness to the industry (Garcia & Calantone, 2002).

## **III. Research model development**

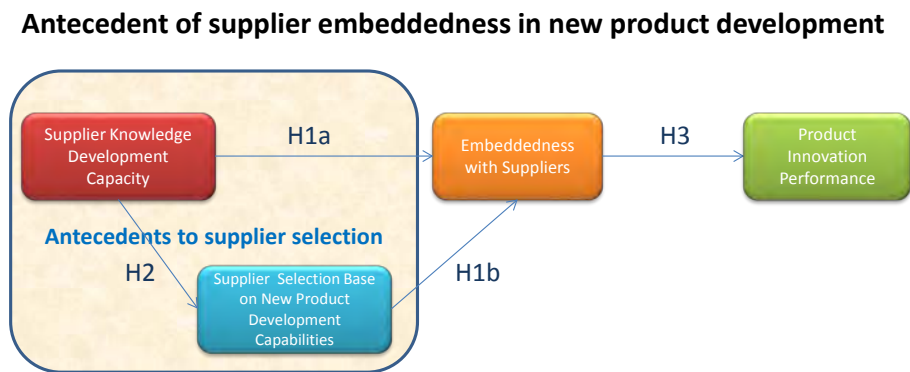
### **3.1 Proposed research model**

Enterprises must continually strive to develop new products to enhance the returns on their business and operations, which can lead to their continued success in the market (Blomqvist, Hurmelinna-Laukkanen, Nummela, & Saarenketo, 2008). However, enterprises cannot solely rely on their own core competencies,

especially in NPD. They must also rely on their suppliers to provide crucial benefits.

The proposed research model features five hypotheses that link together the constructs of (1) KMC, (2) supplier selection based on NPDC, (3) ES in NPD, and (4) PIP as shown in Figure 1.

**Figure 1 Proposed research model.**



### 3.1.3 NPD, KMC, and NPDC as antecedents of supplier embeddedness

Hult, Ketchen Jr., Cavusgil, and Calantone (2006) consider the management of supply chain performance as the key characteristic of KMC, but have ignored the possible role of KMC within the supply chain in NPD as an antecedent of supplier selection. Given that KMC shapes the actions within enterprises (Egelhoff, 1982; Thomas & McDaniel, 1990), this study assesses KMC, which is defined as the ability of an enterprise to create new NPD knowledge, and its effect on enterprise-level PIP.

*Hypothesis 1a: KMC-based supplier selection is positively associated with ES in NPD.*

Given the importance of embedding with suppliers who are committed to working together (Chen, Paulraj, & Lado, 2004), integrating with suppliers that manifest strong PDC may positively affect product innovation. Therefore, we propose the following hypothesis:

*Hypothesis 1b: NPDC-based supplier selection is positively associated with ES in NPD.*

Given that NPD is a knowledge creation process that occurs through the syndication of diverse knowledge streams, enterprises require embedded knowledge in their development of new products. From this perspective, knowledge development is an important component of NPD. Given the aggregate properties of KMC and NPDC in NPD, KMC may have a strong and positive correlation with NPDC for supplier integration in NPD. Therefore, we propose the following hypothesis:

*Hypothesis 2: KMC is positively associated with NPDC-based supplier selection in NPD.*

### 3.2 Embeddedness with supplier and product innovation

Given that the supplier can improve its knowledge and information flow, ES is postulated to have a positive effect on product innovation performance. Excellent KMC among the embedded suppliers with favorable NPDC also enhances the potential of an enterprise to benefit from higher-quality knowledge spillovers, thus providing novel ways to recombine and leverage knowledge, problems, and solutions.

Therefore, the KMC- and NPDC-based selection of suppliers, as antecedents of enterprise ES, also positively affect NPD and PIP. The concept of collaboration with suppliers in NPD is linked with outcomes and product innovation as reflected in the following hypothesis:

*Hypothesis 3: ES in NPD is positively associated with PIP.*

#### IV. Research methodology

Web-based and written questionnaires were employed to test the research hypotheses. The sample comprised enterprises from various industries (e.g., plastics, electronics, metals, textiles, and garments) with NPD activities in the Pearl River Delta (PRD) of Southern China.

Existing measurement items from previous studies were adopted in this study. Pilot studies were also performed to verify the scale items, reduce item ambiguity, and ensure question precision. The constructs were identified and developed from existing literature. Pearson correlation test was performed using IBM SPSS version 20 to test predictive validity and to identify the correlations among the research constructs. SEM by AMOS 20 was used for the conformity factor analysis to validate the factor structure of the constructs and the types of supplier capability grouping (KMC and NPDC) in the research model.

#### V. Findings and Discussion

The questionnaires were mailed to selected suppliers, customers, and relevant individuals, and a high response rate was eventually achieved. Cronbach's alpha was used to assess the scale reliability of each construct in the research model (Figure 1). Table 1 reports the reliability of all factors. The instruments for the constructs were validated by EFA. The structure of the constructs was confirmed by the EFA results. A total of 22 measurement items were explored and five factors were identified.

**Table 1 Results of the reliability test.**

Constructs	Cronbach's Alpha	No. of Items
Enterprise KMC	0.907	11
NPDC-based supplier selection	0.829	2
ES in NPD	0.892	2
PIP	0.954	3
<b>Overall</b>	<b>0.916</b>	<b>22</b>

Principal component analysis was conducted and its findings were aligned with those of previous literature. All variables could be extracted from the principal components that were aligned with our research model. Pearson correlation test was adopted for this study. Table 3 shows that the Pearson correlation coefficients between the constructs are significant.

**Table 2 Correlation matrix built on Person correlation (N=210).**

Constructs	Mean	SD	(1)	(2)	(3)	(4)
(1) Enterprise Knowledge Development	5.370	1.203	1			

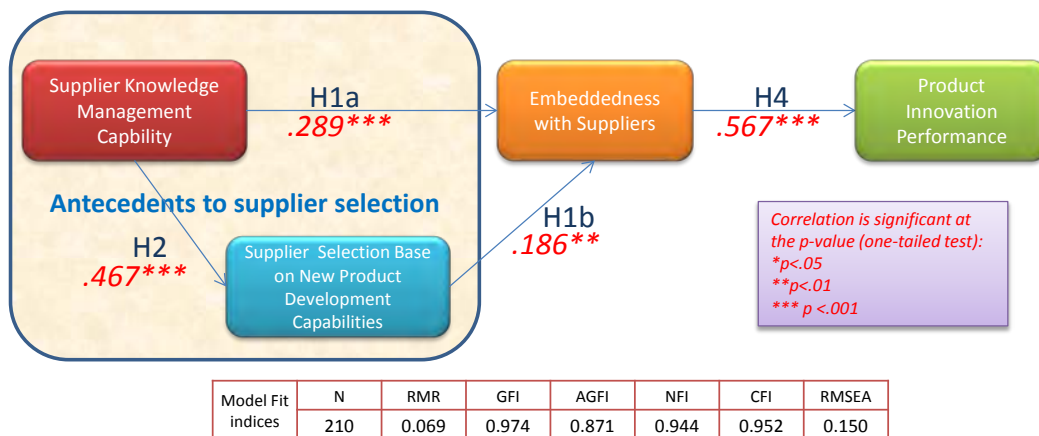


Constructs	Mean	SD	(1)	(2)	(3)	(4)
<b>Capabilities</b>						
(2) PDC-based supplier selection	5.243	1.116	0.489**	1		
(3) ES in NPD	4.955	1.137	0.495**	0.413**	1	
(4) PIP	4.552	1.263	0.460**	0.320**	0.569**	1

The bivariate correlation test results in Table 3 revealed that the effects of antecedent elements on new product performance were not generalizable across various models. We found that those predictors are antecedents of supplier selection,

AMOS 20 was used to conduct a covariance-based path analysis with maximum likelihood estimation. Figure 2 shows the SEM results, the multiple regression result, and the fit of the proposed research model.

**Figure 2 SEM results of the proposed research model.**



H1a, H1b, H2, and H3 are all supported, which indicates that supplier knowledge and NPDC can supplement each other by properly utilizing the competence of suppliers.

Embeddedness implies the nature of the reliance on a network and the influence of social relations. Embeddedness is defined as the extent to which an enterprise relies on its ties with the supplier and how the enterprise perceives the influence of such ties. As a result, H1a and H1b are both supported in this analysis of the antecedents of supplier selection for NPD.

The constructs for the involvement of suppliers in NPD (e.g., product design, manufacturing, testing, and commercialization) are tested in the analysis. The selection of suppliers with strong KMC and NPDC with ES is positively correlated with supplier involvement with PIP. Supplier involvement not only indicates how to adjust the coordination and management efforts to the potential benefits of involving a supplier early and extensively, but also provides detailed recommendations on the form and intensity of communication with different suppliers. Therefore, the supplier system with KMC and NPDC as an antecedent of ES can be used as an approach for integrating suppliers in NPD.

Joint product development with innovative suppliers can enhance learning through an inter-enterprise division of labor (Takeishi, 2002) by allowing the enterprise to learn from the specialties of its suppliers (King, Covin, & Hegarty, 2003).

Presuming in H3 that ES positively affects PIP is reasonable. Both KMC and NPDC serve as antecedents of supplier selection to facilitate embeddedness toward a new and improved PIP.

## **VI. Conclusion**

### **6.1 KMC- and NPDC-based supplier selection**

The KMC- and NPDC-based selection of suppliers can create more organizational knowledge in NPD, which can lead to a better PIP. Most enterprises consider knowledge as crucial in NDP. However, these enterprises select suppliers by using a conventional approach (e.g., CQD) than referring to the KMC and NPDC of suppliers. A supplier selection framework in NPD that depicts the antecedents of and the relationships between KMC and NPDC is built based on the analysis results. These results also support our hypothesis and provide empirical evidence on the anticipated relationship between the selection of suppliers to integrate in NPD and PIP. A few references have been made in the supplier selection according to the NPDC literature. However, none of these studies have explicitly considered neither KMC and NPDC nor the interrelationships between these domains.

Patel (2012) suggests that enterprises can select a supplier base on NPDC to enhance their product innovation. Prior studies on supplier selection for NPD have only considered incomplete views of knowledge and have often focused on existing knowledge. These studies have also rarely considered the KMC of the suppliers.

KMC also has a crucial role in NPD activities and ultimately affects PIP because of the strong correlation between NPDC and KMC. NPDC requires a vast amount of knowledge. However, the relationships between KMC and NPDC have not been explored in prior research. Our results reveal that KMC positively affects PIP.

### **6.2 Managerial implications**

Without KMC and NPDC as antecedents, ES in NPD may not become very desirable for PIP. Enterprises can largely control these factors and alter them to improve the supplier selection process in NPD. Overall, our research gives managers a comprehensive view of the antecedents of supplier selection in NPD, the ways to achieve such antecedents, and their potential consequences.

Enterprises must manage the subtle aspects of memory dispersions and deployment as well as cultivate a proper atmosphere that emphasizes learning, development, and participative decision making. Hurley and Hult 1998 find that higher levels of innovativeness in the enterprises' culture are associated with the greater capacity of these enterprises to adapt and innovate. Enterprises must leverage and use the knowledge that exists along the pipeline for NPD, including the knowledge at the enterprise and supplier levels.

“ES in NPD” advocates a collaborative or relational exchange between enterprises that are committed to work together and are aiming toward mutual benefits (Chen et al., 2004), risks, and rewards (Shin et al., 2000). The enterprises under dynamic and turbulent environments must focus on their embeddedness with proper suppliers from qualitative and quantitative perspectives. To build embedded ties with suppliers, enterprises must develop cooperative and long-term relationships with suppliers and assist suppliers in their NPD. Such efforts must be accompanied with the antecedents of KMC- and NPDC-based supplier selection. An enterprise can

employ a limited amount of resources in building and nurturing relationships with others. Given that building such relationships consumes much time and resources, organizations tend to collaborate with few extremely capable suppliers. Moreover, selecting a small number of partners provides a strong incentive for suppliers to cooperate with enterprises to increase the volume of their business.

Our empirical study provides suggestions about the antecedent that fosters a robust supplier selection and integration in NPD. Given that the identified factors are controllable by the senior management, deliberately engendering suppliers with KMC and NPDC is now possible.

Although previous literature suggest that ES in NPD is helpful, enterprises must cultivate their organizational culture and their employees must demonstrate behaviors and allocate resources to reflect their commitment to embeddedness with specific suppliers. The senior management must also promote positive attitudes to cultivate knowledge sharing between the embedded suppliers and the involved colleagues.

“ES in NPD” is conducive to product innovation even though we have selected a capable supplier who has a strong KMC. However, extracting the knowledge of suppliers for NPD is difficult without adopting a proper integration approach or knowledge and technology transfer strategies to embed ties during the NPD process. This gap can be addressed in future studies by examining specific strategic initiatives, collaboration structures, and forms of integration along the supply chain for NPD. These studies can also propose fruitful approaches for achieving better performance outcomes.

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# **Structural Change and China's Economic Growth: An Empirical Analysis Based on China's Provincial Panel Data**

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## **Abstract**

The purpose of the paper is to answer the question that whether China's economic growth causes structural change or changes in economic structure causes aggregate growth. By using SUR method, the result shows that there is a heterogeneous non-causality (HENC) relationship between them, which means that there exists such a relationship for at least one individual and at most 28 individuals among all provincial areas. Results differ in a way of whether the structural change is measured in terms of real value added or employment. Economic growth has a positive impact on the increase in the proportion of output both in secondary and tertiary industries, and on the decrease effect in primary industry. Advancing and rationalizing changes in economic structure could promote economic growth significantly. Both mechanisms vary in different stages of development and depend on how well modern industry system are constructed and to what extent that market plays its role in the future.

**Keywords:** structural change, China's economic growth, granger causality test, modern industry system

## **Coaches' Leadership and Their Administrative Succession: Using the Chinese Professional Baseball League (CPBL) as an Example**

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### **Abstract**

This study used Hierarchical Linear Modeling (HLM) to investigate the relationships between a coach's administrative succession and team performance. The coach's administrative succession refers to how adjusting to a new coach will affect players' performance. We used the Chinese Professional Baseball League (CPBL) as our research subject, and collected 463 player performances from four CPBL teams in 11 seasons (2004-2014). This study verified that batting average is positively and significantly related to team performance, which is consistent with previous research; on the other hand, run average and coaches' administrative succession are negatively related to team performance.

**Keywords:** Administrative Succession, Hierarchy Linear Models, Professional Baseball League

# Understanding Consumers' Reponse to Voluntary Product Recalls: the Role of Corporation Assotiation and Consumers' Congitive Frame

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## **Abstract**

One of the most pressing problems faced by business leaders in product recalls is to reduce negative consumer responses and protect the firms' reputation. Though most research suggested that voluntary recall before any consumer safety incidents occur causes positive consumer response, some companies are blamed when initiating voluntary recalls. In this paper, we examine the formation of consumer's interpretation on voluntary product recalls and their response to communication strategies adopted by the company. Based on structural alignment theory, the author proposes that corporate association of a company held by consumers influence consumers' cognitive frame of the voluntary product recall events initiated by the company. The results of field experiments reveal that when consumers hold corporate ability associations for the company, they are more likely to see product recall as signals of product defect or failure. When consumers hold corporate social responsibility associations for the company, they are more likely to see product recall as benevolent action to protect customers from potential risk. Besides, the alignment between consumers' cognitive frame and communication strategies adopted by the firm affect consumers' attitudes to firms initiating voluntary recalls. When a product recall is interpreted as signal of product failure, accommodative response strategy indicated acceptance of product defect and strengthen negative attitude, while a product recall is interpreted as goodwill of the firm, accommodative response strategy will strengthen positive attitude.

**Keywords:** Voluntary Product Recall, Corporation Assotiation, Consumers' Congitive Frame, Communication Strategy, Consumers' attitude





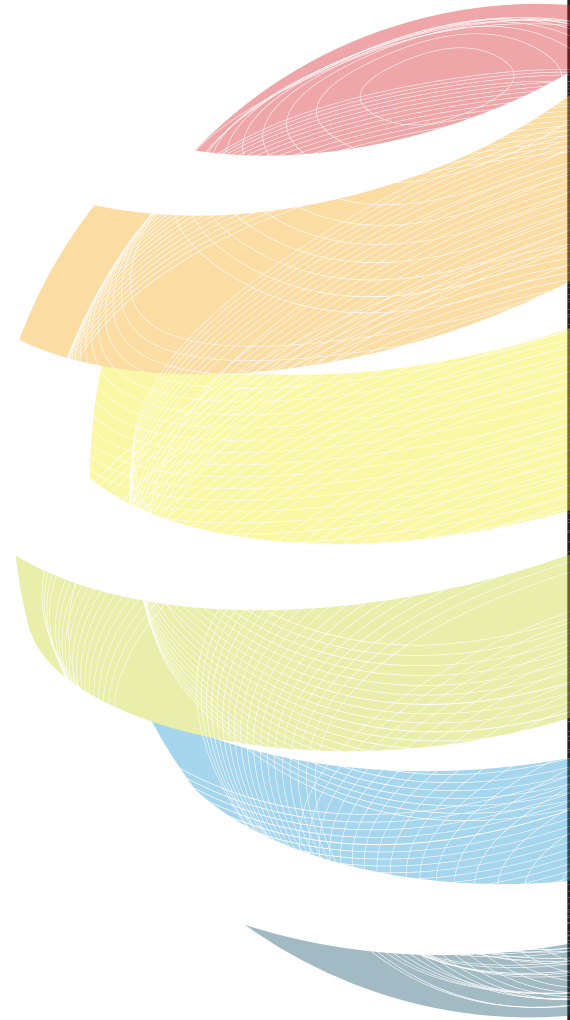
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# **The Moderating Effect of Firm Flexibility and Intangible Resources on the Relationship between Entrepreneurial Orientation and Performance of Korean SMEs**

**You-Min Choi**

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## **Abstract**

Drawing from a sample of 4611 Korean SME observations, this study identifies and finds support for the moderating effect of firm age and debt ratio on the EO-firm performance relationship; younger firms, and firms with higher debt ratio exhibit stronger performance in conjunction with an entrepreneurial strategic posture. In exploring a joint moderating model between EO, firm age (debt ratio), and intangible resource advantage, this study finds that there is not a meaningful influence of the firm age (debt ratio) in the level of the EO-firm performance in conjunction with intangible resource endowment. The findings of this study suggest, among other implications, that the organizational context that separates by the age and debt-to-total assets ratio represents an important theoretical and empirical consideration on the question of why some SMEs are able to sustain superior performance and others are not.

## **I. Introduction**

It is well accepted that firms with entrepreneurial orientation perform better than conservative firms (Rauch et al., 2009; Miller, 1983; Covin and Slevin, 1989; 1991; Covin et al., 2006). Entrepreneurial orientation refers to the behavioral tendencies, managerial philosophies, and strategic decision-making practices that are entrepreneurial in nature. There has been a growing interest paid to the factors that may affect the degree or nature of the relationship between entrepreneurial orientation and business performance (Marino et al., 2002; Miles et al., 2000; Kreiser et al., 2001; Barney, 1991). The intention is to explore in what conditions entrepreneurial orientation can be relevant to the firm performance. From this perspective, this study will empirically examine two potential moderating effects on the relationship between entrepreneurial orientation and firm performance—the firm's, flexibility and its intangible resource advantage. More specifically, this study will investigate the followings: 1) How firm flexibility and intangible resources will change the degree of the entrepreneurial orientation—performance relationship; and 2) What interaction effects exist among entrepreneurial orientation, firm flexibility, and intangible resources.

From a sample of 4611 Korean SME observations, this study identifies and finds support for the moderating effect of firm age and debt ratio on the EO-firm performance relationship; younger firms, and firms with higher debt

ratio exhibit stronger performance in conjunction with an entrepreneurial strategic posture. The moderating effect between EO and intangible resource advantage is not, however, significantly influence the performance of sample firms. across table. This suggests that the possession of higher levels of intangible resources relative to its peers is not relevant in moderating the EO-firm performance relationship.

This paper also exploits three-way interaction effect among EO, intangible resources, and firm age (or debt ratio) on the firm performance to test the hypothesis that younger firms (or highly leveraged firms) may better exploit their strategically valuable intangible resources than other firms in conjunction with an entrepreneurial strategic posture and, therefore, exhibit the stronger performance. However, the results fail to support this hypothesis.

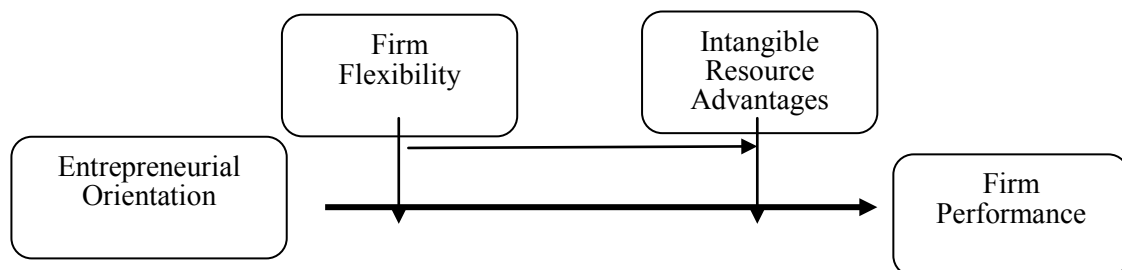
This paper proceeds by introducing research model and building the hypotheses for firm flexibility and intangible resources as conditions for the entrepreneurial orientation—performance relationship.

## II. Research Design

### 2.1. Hypotheses Development

This study investigates two potential moderators, firm flexibility and intangible resources, for the relationship between entrepreneurial orientation and firm performance among small to medium sized enterprises (SMEs) in Korea.

<Figure 1>



As depicted in Figure 1, this study argues that firm flexibility and intangible resource advantages moderates the relationship between entrepreneurial orientation and firm performance among SMEs in Korea. Hypotheses are as follows:

- Hypothesis 1: The EO-firm performance relation is expected to be stronger among firms with more firm flexibility.

This study adopts the perspective that younger firms are more flexible in responding to new business opportunity and thus the relationship between entrepreneurial orientation and firm performance is stronger among younger firms than among older firms. The firm's future entrepreneurial behaviors are a function of those that occurred in the past. As such, the development and implementation of entrepreneurial strategies among older firms is based, in part, on an understanding of past market

conditions that are increasingly divergent with current market expectations as time progresses (Hill and Rothaermel, 2003). Younger firms, with more temporally salient market knowledge and benefiting from a higher level of adaptability and strategic flexibility with which to exploit new entrepreneurial initiatives, are thus better positioned to capture value from their entrepreneurial strategies and, therefore, exhibit superior performance outcomes relative to their older peers (Miller and Shamsie; 1996; Newbert, 2007; Rosenbusch et al., 2011).

This study also uses the debt-to-total assets ratio as a measure for firm flexibility. Firms with larger debt are normally placed under close scrutiny of creditor banks in order to preempt firms credit crunch. A prolonged economic slump could seriously damage business conditions for small and medium size firms, especially in early stage of growing firms. banks will strengthen the monitoring of balance sheets of troubled firms over concerns that worsening economic conditions will force more firms to become marginalized. Therefore firms with larger debt are subject to be less flexible in responding to new business opportunity. However, if managers of these firms are entrepreneurs who have more temporally salient market knowledge and strategic flexibility with which to exploit new entrepreneurial initiatives, they can be better positioned to capture value from their entrepreneurial strategies and exhibit superior performance outcomes relative to their peers. Thus, the moderating effect between EO and firm flexibility can positively influence the performance of SMEs.

- Hypothesis 2: The EO-firm performance relation is expected to be stronger among firms with more intangible resource advantages.

Given that SMEs tend to have lower levels of tangible resources such as property, equipment, and capital, intangible resources have disproportionately higher strategic value. Because entrepreneurial orientation is a resource consuming strategic posture, the availability or constraint of strategically valuable resources influences the breadth and depth of entrepreneurial opportunities to be pursued. Thus, entrepreneurial orientation, in conjunction with intangible resource advantages, should facilitate stronger performance among SMEs. Finally, SMEs with an entrepreneurial strategic posture, that possess temporally salient market knowledge and are more structurally adaptive (e.g., are younger), and that possess an intangible resource advantage relative to their industry rivals, should exhibit the strongest performance outcomes. As intangible resources, this study uses intangible asset items available in the balance sheet of entrepreneurial firms, such as research and development activities, trademarks, patents, copyrights, etc.

- Hypothesis 3: There is a three-way moderating (interaction) effect such that firms that are more flexible and possess more intangible resource advantages will exhibit the strongest levels of performance in conjunction with higher levels of entrepreneurial orientation.

Younger firms (or leveraged firms) tend to be more resource constrained in terms of tangible and

slack resources, and as such, intangible resources take on greater strategic significance (Miller and Shamsie, 1996). Firms with an entrepreneurial strategic posture tend to possess temporally salient market knowledge and be more structurally adaptive, resulting in intangible resource advantages relative to their industry rivals. Thus, younger firms (or leveraged firms) with entrepreneurial orientation that possess intangible resources in a quantity or quality above that of their peers should enjoy a superior competitive position (Newbert, 2007) and should exhibit the stronger performance outcomes.

## 2.2. Research Model

To test formally whether entrepreneurial orientation positively influence the firm performance, the paper adopts the following multivariate regression model.

$$FP = a + b_1 ENT + b_2 AGE(DEBT) + b_3 INT + b_4 EXG(EXD) + b_5 EXINT + b_6 EXGXINT(EXDXINT) + e \quad (1)$$

where

FP: Firm performance measured by net income-to-total assets ratio

ENT: ENT =1 if a CEO is a founding CEO, otherwise ENT=0

AGE: The log of the number of years since a firm is set up

DEBT: Debt-to-total assets ratio

INT: Intangibles-to-total assets ratio

EXG: The moderating variable for ENT and AGE

EXD: The moderating variable for ENT and DEBT

EXINT: The moderating variable for ENT and INTGL

EXGXINT: The moderating variable for ENT, AGE, and INTGL

EXDXINT: The moderating variable for ENT, DEBT, and INTGL

Conceptual arguments concerning the EO-business performance relationship generally focus on financial profitability indicators, because firms characterized by higher level of EO may enter into premium market segments, may charge higher prices and may skim the market before their competitors do, which enables them to reap greater profits (Wiklund and Shepherd, 2003; Zahra, 2001). Thus, this paper uses the net income-to-total assets, also known as ROA, as a measure for firm performance.

This research model adopts the perspective that entrepreneurial orientation is fundamentally representative of a strategic organizational posture that encourages the acquisition, structuring, and exploitation of a firm's resources that facilitate sustained competitive advantages. However, the availability of entrepreneurial orientation measures is limited because of difficulties of conceptualization of what it means. Entrepreneurial organizations often initiate actions to which competitors then respond, and are frequently first-to-market with new product offerings. In support of this strategic orientation, entrepreneurial firms characteristically emphasize technological leadership and research and development. In this regard, this paper adopts the perspective that if the CEO of a firm is also the founder, the firms is entrepreneurially oriented. That is, firms with founding CEO are willing to take on high-risk projects with chances of very high returns, and are bold and aggressive in pursuing opportunities.

ENT is a dummy variable indicating a value of 1 if a firm's CEO is the founding CEO. Since ENT represents the entrepreneurial orientation (EO), ENT is expected to be positively associated with the firm performance variable (FP).

AGE and DEBT are the age of sample firms and the debt-to-total assets ratio, respectively, indicating a firm's flexibility. As mentioned earlier, the smaller the age of a firm is, the more organizationally flexible the firm is.

Since younger firms are expected to be benefiting from a higher level of adaptability and strategic flexibility with which to exploit new entrepreneurial initiatives, the inverse value of firms' age is more appropriate to examine the moderating (interaction) effect of EO and firms' age (EXG) on the firm performance.

Another measure for firm flexibility is the debt-to-total assets ratio. Higher debt-to-total assets ratio could indicate less flexibility in a firm's operation, resulting poorer performance. However, if managers of these firms are entrepreneurs with EO, they can be better positioned to capture value from their entrepreneurial strategies and exhibit superior performance outcomes relative to their peers. Thus, the moderating effect between EO and debt ratio (EXD) on the firm performance is expected to be positive.

EXA and EXD are designed to test Hypothesis 1. EXINT is used to examine Hypothesis 2. EXGXINT and EXDXINT are the moderating variables to explore the relationship between EO and firm performance in conjunction with firm flexibility and intangible resource advantages (Hypothesis 3). These interaction variables are expected to have a positive relation with firm performance.

### III. Research Results

#### 3.1. Sample Description

Data on EO-performance are obtained from the KIS-Value database for KOSDAQ listed firms for a period between 2010 to 2014. For inclusion in the final sample, sufficient financial data are required to estimate multiple regression models. Firms in the banking and financial industries are excluded because firm characteristics differ from general firms. The final sample consists of 4661 observations over the sample period. Of these, 3002 observations are firms with founding CEOs and 1659 observations are comparable firms with professional CEOs. Table 1 reports the summary statistics for these two groups and overall sample.

<Table 1> Summary statistics

Panel 1. Overall sample					
Variables	N	Mean	St. Dev.	Minimum	Maximum
Operating Profit/Total Assets	4,661	0.036	0.088	-1.032	0.563
Net Income/Total Assets	4,661	0.003	0.191	-6.295	0.489
Entrepreneur	4,661	0.644	0.479	0.000	1.000
Age	4,661	23.741	11.099	1.028	72.007
Debt Ratio	4,661	0.384	0.204	0.001	2.428
Intangibles/Total Assets	4,661	0.040	0.069	-0.092	0.799



<b>Panel 2. Entrepreneur=0</b>					
Variables	N	Mean	St. Dev.	Minimum	Maximum
Operating Profit/Total Assets	1659	0.022	0.099	-1.032	0.563
Net Income/Total Assets	1659	-0.028	0.276	-6.295	0.489
Entrepreneur	1659	0	0	0	0
Age	1659	23.603	11.499	1.028	71.108
Debt Ratio	1659	0.400	0.215	0.007	2.428
Intangibles/Total Assets	1659	0.041	0.073	-0.092	0.599
<b>Panel3. Entrepreneur=1</b>					
Variables	N	Mean	St. Dev.	Minimum	Maximum
Operating Profit/Total Assets	3002	0.043	0.081	-0.486	0.558
Net Income/Total Assets	3002	0.020	0.118	-1.998	0.465
Entrepreneur	3002	1	0	1	1
Age	3002	23.817	10.874	2.007	72.007
Debt Ratio	3002	0.375	0.198	0.001	1.956
Intangibles/Total Assets	3002	0.039	0.067	-0.091	0.799

Firm performance measures (operating profit/total assets and net income/total assets) are larger for the entrepreneur sample than the non-entrepreneur sample. They vary from the mean 0.022 (operating profit) and -0.028 (net income) for the non-entrepreneur sample to 0.043 (operating profit) and 0.020 (net income) for the entrepreneur sample. The mean of debt ratio and intangible-to-total assets are less for the entrepreneur sample than those for the non-entrepreneur sample. However, the mean of age is slightly larger for the entrepreneur sample than that for the non-entrepreneur sample.

<Table 2> Pearson Correlation Coefficients

	Operating profit /Tot. Assets	Net Income/Tot. Assets	Entrepreneur	Age	Debt Ratio	Intangibles/Tot. Assets
Oper. Profit/Total Assets	1	0.651	0.111	-0.034	-0.274	-0.116
Prob >  r		<.0001	<.0001	0.0203	<.0001	<.0001
Net Income/Total Assets	0.651	1	0.121	0.006	-0.316	-0.092
Prob >  r	<.0001		<.0001	0.6699	<.0001	<.0001
Entrepreneur	0.111	0.121	1	0.009	-0.060	-0.018

Prob >  r	<.0001	<.0001		0.5285	<.0001	0.2274
Age	-0.034	0.006	0.009	1	0.085	-0.167
Prob >  r	0.020	0.670	0.529		<.0001	<.0001
Debt Ratio	-0.274	-0.316	-0.060	0.085	1	-0.066
Prob >  r	<.0001	<.0001	<.0001	<.0001		<.0001
Intangibles/Total Assets	-0.116	-0.092	-0.018	-0.167	-0.066	1
Prob >  r	<.0001	<.0001	0.2274	<.0001	<.0001	

Table 2 presents the Pearson correlations between performance and each of the variables related to entrepreneurial orientation for the overall sample. Entrepreneurs (founding CEOs) are significantly positively correlated with performance measures; the level of significance is generally at the .0001 levels. The negative correlation are somewhat stronger for the debt ratio and intangible ratio, suggesting that the higher the debt ratio and intangible ratio are, the worse the firm performance is.

### 3.2. Regression Estimation Results

Table 2 presents the multiple regression results. Model 1 contains control variables, and Model 2 enters the moderating terms for the joint consideration of EO and firm flexibility, and EO and intangible resource advantages, which test Hypothesis 1. Model 3 enters the three-way interaction variable of EO, intangible resources, and firm flexibility into the model.

As shown in Table 3, ENT has significantly positive coefficients across table except models with variables EXD, suggesting that the entrepreneurial orientation is positively associated with firm performance. As a measure for firm flexibility, AGE (the inverse value of firms' age) is positively related to firm performance, indicating that the younger the firm is, the less the performance is. Another measure for firm flexibility, DEBT, has consistently negative coefficients across table. This result suggests that firms with larger debt are subject to be less flexible in responding to new business, thus resulting in poorer performance. However, intangible resource advantage variable, INT have consistently negative coefficients across the estimation results.

The coefficients of EXG variable in Model 2 and Model 3 are positive and statistically significant at 1% and 10% levels of significance, suggesting that Hypothesis 1 is supported, as the positive coefficients of the interaction term suggests that the relationship between EO and firm performance is stronger among younger firms.

The coefficients of EXD variable are negative and statistically significant across table at 1% level of significance. This result also supports Hypothesis 1. The result suggests that leveraged SMEs with an entrepreneurial strategic posture, despite their limited flexibility because of high debt ratio, are able to generate higher levels of firm performance, compared to their peers (without founding CEOs).

The interaction variables of EO and intangible resources, EXINT, are not statistically significant across table.

Thus Hypothesis 2 is failed to be supported, suggesting that the possession of higher levels of intangible resources relative to its peers is not relevant in moderating the EO-firm performance relationship.

The three-way interaction variables of EO, intangible resources, and firm age (EXGXINT) or debt ratio (EXDXINT) are not statistically significant in Model 3, resulting in failing to support Hypothesis 3.

**<Table 3> Multiple Regression Results**

	Model 1		Model 2		Model 3	
<b>Intercept</b>	0.103 (14.66)	-0.024 (-4.35)	0.155 (15.83)	-0.023 (-3.83)	0.155 (15.84)	-0.023 (-3.83)
<b>ENT</b>	0.040 (7.29)	0.049 (8.47)	-0.042 (-3.47)	0.032 (3.34)	-0.046 (-3.73)	0.037 (3.38)
<b>AGE</b>		0.096 (2.35)		0.059 (1.38)		0.059 (1.38)
<b>DEBT</b>	-0.297 (-23.02)		-0.424 (-20.77)		-0.424 (-20.78)	
<b>INT</b>	-0.307 (-8.1)	-0.248 (-6.23)	-0.317 (-5.27)	-0.215 (-3.38)	-0.317 (-5.27)	-0.215 (-3.38)
<b>EXINT</b>			0.012 (0.15)	-0.070 (-0.85)	0.114 (1.15)	-0.208 (-1.15)
<b>EXG</b>				0.374 <sup>***</sup> (2.77)		0.290 <sup>*</sup> (1.73)
<b>EXD</b>			0.210 <sup>***</sup> (8.01)		0.224 <sup>***</sup> (8.12)	
<b>EXGXINT</b>						2.559 (0.86)
<b>EXDXINT</b>					-0.358 (-1.62)	
<b>Adj R<sup>2</sup></b>	0.12	0.02	0.13	0.03	0.13	0.03
<b>F-value</b>	217.06	38.19	144.84	24.58	121.18	20.6

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<b>Pr&gt;F</b>	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
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\*\*\*, \*\*, \* are 1%, 5%, and 10% significance levels, respectively.

#### IV. Conclusion and Discussion

This study investigates two potential moderators of the relationship between entrepreneurial orientation (EO) and firm performance among small to medium sized enterprises (SMEs) in Korea. The flexibility of the firm and its intangible resource advantage are instrumental in exploring such a moderating effect on the EO-performance relation.

Regarding the contextual influence of firm age on the EO-performance relationship, this paper finds that younger firms are likely to possess an organizational context more advantageous to the pursuit and adoption of entrepreneurial initiatives. This context enables greater flexibility, strategic adaptability, and the pursuit of entrepreneurial opportunities better aligned with market needs, which results in a strengthening of the EO-performance relationship.

The results also support the influence of a debt-to-total assets ratio on the EO-performance linkage. As hypothesized, SMEs with larger debt tend to be more resource constrained in terms of tangible and slack resources and thus less flexible in responding to new business opportunity. This problem, according to the finding, can be mitigated when their CEOs possess entrepreneurial initiatives which enables them greater flexibility and strategic adaptability in pursuing business opportunities.

On the other hand, firms in possession of intangible resources in a quantity do not enjoy a superior competitive position to engender superior performance, even though the level of EO increases. As hypothesized, the joint consideration of EO, firm flexibility, and intangible resource advantage should result in significant performance differences. Results obtained from this study do not supported the hypothesized relationships.

The findings of this study suggest, among other implications, that the organizational context that separates by the age and debt-to-total assets ratio represents an important theoretical and empirical consideration on the question of why some SMEs are able to sustain superior performance and others are not.

The contribution of this paper is that while the current literature's approach is to use questionnaire survey to investigate the moderating effect, this paper examine the topic using real firm data instead of using questionnaire survey. This approach will allow us to use more data for the analysis and may give a different perspective.

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# Relationship between SRC and African Labors

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## **Abstract**

This thesis is conducted to find practical solutions to the illegal labor usage in developing countries. In the current world, under the name of Capitalism, corporations including SRC (Socially Responsible Corporation) are breaking down the rights of people especially in Africa by neglecting laborers' minimum revenue guarantee and illegal child labor usage. In order to finish vicious cycle, SRC should be the first one to step out for finishing inhumane circumstances. In study, scope of the analyzing countries is Africa, considering the time limits. Corporations' statistical accumulation will be ranged to SRC for efficiency.

Thesis will conduct the study in two aspects. First, this study will tabulate SRC's illegal labor usage in Africa. Second, this study will attempt possible solutions to finish illegal labor usage in Africa.

This study is going to be the first step to break vicious cycle in underdeveloped countries. Starting by providing solutions to SRC in Africa can be a role model to the rest of corporations that are illegally hiring labors. Practicality in researching and concise solutions will be the main issue.

## **I. Introduction**

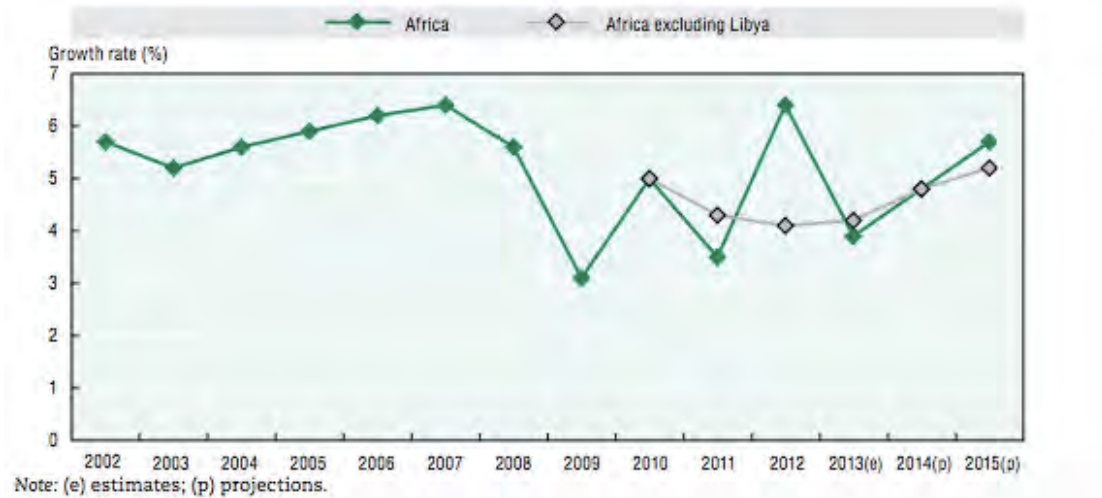
After World War II, the international society started to recognize the rights of equality and hence the right of laborers also enhanced significantly. Nonetheless, Africa is still being isolated from this international trend. Sweatshops – a workplace that has socially unacceptable working conditions – are yet being considered as an obvious working environment for industries such as chocolate or sugar. They cannot even imagine being unionized, nor being properly paid. Even worse, due to a relatively weak government and law system, child labor is being admitted as a social norm in most of African regions. In this context, the roles of socially responsible corporation (SRC) became crucially important. As a form of corporate self-regulation integrated into business model and therefore pursue the social benefit rather than their profit maximization, the application of SRC into Africa labor market would be able to alleviate the current system.

Thus, this research will be able to tackle the problem of Africa labor market and be a guideline of balancing between the laborers and corporations.

## **II. Main Body**

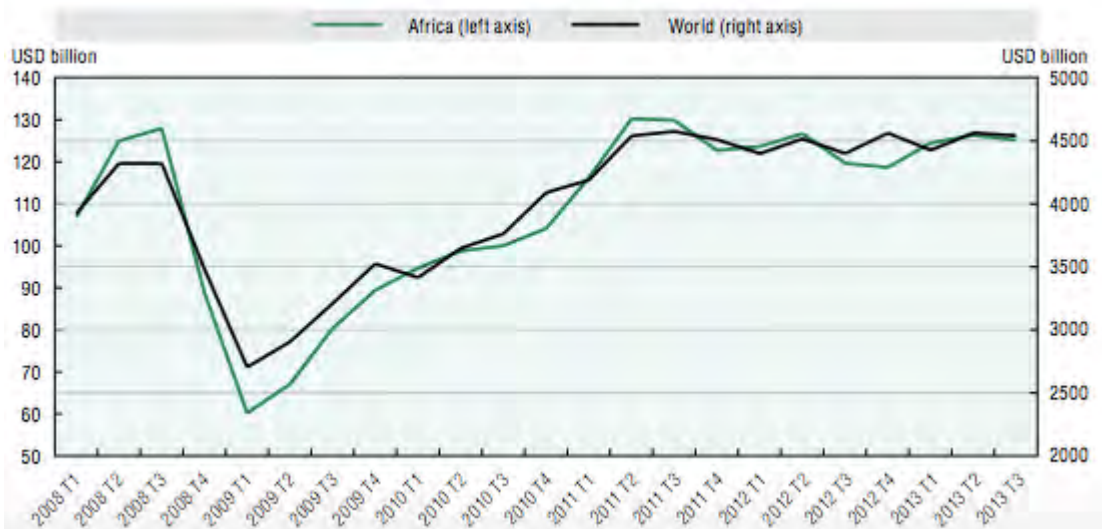
### **2-1. Economical Status in Africa and SRC running system in Africa**

Mainly, African economical status is unstable considering GDP status.



(Global Value Chains and Africa's Industrialization, OECD 2014, p22)

Compare to the Asian countries African governmental body has trouble in administration, especially in economical field. However, African economy is growing rapidly so the market itself is tempting to conglomerates as they can have controls in whole procedure.



(Global Value Chains and Africa's Industrialization, OECD 2014 p 28)

Moreover, the amount of export is growing rapidly. According to the African development Bank, the level of income and exporting margin have increased last ten years.

(real GDP growth in percentage)						
	2010	2011	2012	2013 (e)	2014 (p)	2015 (p)
<b>By level of income</b>						
Upper-middle-income countries	3.5	3.1	3.2	2.8	3.9	4.3
Lower-middle-income countries	5.5	3.6	4.3	4.7	4.7	5.5
Low-income countries	7.2	6.2	5.2	5.1	7.0	6.9
<b>By source of export earnings</b>						
Fuel	5.5	4.1	5.4	5.4	6.4	6.3
Non-fuel primary products	6.1	3.8	7.1	6.1	7.5	7.4
<b>By level of export diversification</b>						
High diversification index	4.0	2.9	2.8	2.8	3.0	3.9
Medium diversification index	4.5	2.6	5.8	5.9	6.5	6.8
Low diversification index	6.2	5.3	5.2	5.5	6.3	6.4
<b>By financial criteria</b>						
Net creditor countries	5.5	4.3	5.3	5.6	6.3	6.4
Net debtor countries	4.9	2.9	6.8	3.2	4.2	5.4
<b>By fragility</b>						
Countries in fragile situations	6.2	2.2	2.7	4.7	6.2	6.5
Land-locked countries	8.6	6.6	4.6	6.2	7.0	6.7
<b>Africa excluding Libya</b>	<b>5.1</b>	<b>4.3</b>	<b>4.1</b>	<b>4.1</b>	<b>4.8</b>	<b>5.3</b>

Note: (e) estimates; (p) projections.  
Source: Statistics Department, African Development Bank.

(Statistics Department, African Development Bank, p11)

Thus, African countries are in major turning point at this stage so labor settings should be also taken into modest consideration. Labors in Africa who are working on corporations have worse working environment while they are showing major development. Moreover, SRC running system is based on using cheap and efficient labor in order to produce simple food and manufacturing business. In order to have win-win conclusion, finding practical solutions for both African labor system and SRC hiring procedure is necessary.

## 2-2.Problem analyzing and hypothesis settings

The research shows that most of African industries are focused on simple manufacturing and agricultural production.

	Botswana	Ghana	Kenya	Mauritius	Namibia	Nigeria	SouthAfrica	Swaziland	Zambia	Zimbabwe
Agriculture			5	16	11	8				9
Construction				8	10	9	8		8	9
Finance, Insurance & Real Estate	11	9	8	10	12	9	9	8	9	10
Manufacturing	7	8	8	11	11	8	9	14	8	8
Mining	12	12	6	4	10	8	7		17	8
Others						12	8			5
Services		7	11	14	9	9	14		10	
Transport, Electrical & Communications		7	13	11			9			7
Wholesale and Retail Trade	9	8	19	11	8	9	8			9
National average board size	10	9	10	10	11	9	8	12	9	8
CEOs as Chairperson	NA	5(23)	5(54)	2(43)	NA	NA(*)	NA(+)	NA	NA	NA
<b>Modal board size</b>	<b>12</b>	<b>7(9)</b>	<b>7(9)</b>	<b>9,10</b>	<b>11,12</b>	<b>10</b>	<b>4</b>	<b>14</b>	<b>8</b>	<b>8(6)</b>

(Corporate governance in Africa: The record and policies for good governance, Melvin D. Ayogu, University of Cape Town, 2001, p14)



This means when African labors are being hired, they usually have simple job to do so their working field are mostly on field and large factory. According to the research (Global Wage report, ILO, 2010) 78% of labors in Africa have no cooling system in their working field. In order to provide suitable working place, first corporations have to make sure that labor workers can have drinkable water system and cooling system as same as developed countries.

The wage growth is also a major problem. In research, the growth of African labor wage is 5% during ten years.

	1999	2006	2007	2008	2009
Advanced countries	100	104.2	105.0	104.4	105.2
Central and Eastern Europe	100	144.8	154.4	161.4	161.3
Eastern Europe and Central Asia	100	264.1	308.9	341.6	334.1
Asia	100	168.8	180.9	193.8	209.3*
Latin America and the Caribbean	100	106.7	110.3	112.4	114.8
Africa	100	111.2*	112.8*	113.4**	116.1**
Middle East	100	101.9*	102.4*	...	...
Global	100	115.5	118.7	120.6	122.5

\* Provisional estimate. \*\* Tentative estimate. ... No estimate available.  
 Note: For coverage and methodology, see Technical appendix I of the Global Wage Report 2010/11.  
 Source: ILO Global Wage Database.

(Global Wage report, ILO, 2010, 11p)

In order to fix this problem, wage increase rate should be fastened as same as the average of developed countries.

Moreover, governmental system in surveillance to corporations (including SRC) is weak to check out weak point of policy. According to the research, 34% corporations in Africa are not under the surveillance of Africa countries' government. (Multiple influences on corporate governance in sub-Saharan Africa: Actors, strategies and Implications, Emmanuel Adegbite, University of Warwick 2010) This problem should also be fixed.

### 2-3. Hypothesis

First, Africa is adopting legal labor usage system in upgrading working system. In detail, cooling system and supply line of edible water. Moreover, finding ways to efficiently providing cooling tools and waters will be needed.

Second, In this method, paying same amount of manpower salary of developed country to African countries and keeping legitimate working time are necessary. The salary will be as same as the other world labor salary amount.

Third, setting surveillance system by African government in order to look on SRC and other corporation working procedures.

From the hypothesis, major three expectation are assumed.

First, African labors will be treated as same as the other labor powers in world. This will directly lead African public health status to be upgraded. Slippery slope will be reversed to positive slope.

Second, same amount of salary will increase GDP dramatically. This will give major boost to the African economy. Positive effects can be assumed.

Third, surveillance system will spread out throughout the Africa society and it will broaden to the other social sector as well. Increasing welfare system will happen.

### **III. Conclusion**

This research of ways to resolve the current status quo problem in Africa labor will be constructing a system that can be applied into corporations that balances between African labor and corporations' social responsibility. In this way, socially responsible corporations will be able to create jobs that ensure labors' right, and therefore improving the situation of labor abuse. It will be able to naturally induce to companies to change their ways of treating laborers. This is a significant change in Africa especially concerning that most of the governments in African region fail to show strong law enforcement and government power. Furthermore, if this system turns out successfully, it would be an exemplary case and be further applied to other corporations, and consequently bring development in all parts - economy, legislative, medical, and other industries – in African region.

Also, hypothesis can be adopted into the other countries more than Africa; underdeveloped Arab countries can also be beneficiary. We can expect the turning point by developing the hypothesis above.

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## **A Study on Growth of Cooperatives and Income Inequality among Related Professions: the Case of NACF**

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### **Abstract**

This study is aimed to estimate the correlation between the growth of cooperatives and the income inequality among related professions in Korea.

After the enactment of the Framework Act on Cooperatives in 2012, about 7,000 cooperatives have been established for 2 years and numerous experts expect much more cooperatives will be established. Because of the rapidly increasing number of cooperatives in Korea, the effect and function of cooperatives should be studied in-depth. Especially, the aspect of the equality between members, which International Cooperative Alliance emphasizes as the basic value for its close relations with the economic well-being of members, should be verified in-depth. However, to study the general social impact of cooperatives rather than the impact within cooperatives, this study will focus on the correlation between cooperatives and the income inequality among workers who work in the related industry.

Because the majority of cooperatives in Korea have been established after the enactment of the Framework Act on Cooperative, most industrial areas cannot offer sufficient data for the analysis. On the contrary, in agricultural field, there exists the biggest agricultural cooperative in Korea, NACF, which was established in 1969 based on the Act of National Agricultural Cooperative Federation. In 2014, the number of members of the cooperative is 2,350,502 out of 2,751,792 agriculture populations, which means 85.4% of agriculture population is a member of NACF. Based on the assumption that NACF can represent the whole cooperatives in agriculture due to its size, this thesis analyzes the case of NACF and the income inequality among agriculture households, which is expected to indicate meaningful assessment of the effect of cooperatives on the income equality of workers of industries.

Correlation and Regression analysis is used in this study. To quantify the growth of NACF, total sales, number of members, amount of investment per members, and ratio of total sales in agricultural field to total sales of NACF, which includes credit business, are used in the study and the data is from 2000 to 2011. Also, to quantify the income inequality of farm households, GINI coefficient-0 GINI coefficient indicates complete equality while 1 indicates complete inequality- and Mean Log Deviation are used. Especially, Mean Log Deviation is more affected by distribution of low-income households than other indices, which allows diversified analysis. This study sets the growth of NACF as independent variables while the income inequality as dependent variables.

The results of the analysis demonstrate that even though cooperatives grow in many ways, there is possibility that they do not contribute to the solution of income inequality among related professions if cooperatives have not concentrated on the well-being of members.

The possible limitation of the study is that the study fails to consider the effect of other factors such as age effects.

**Keywords:** Cooperative, NACF, Inequality, GINI coefficient, Mean Log Deviation

## I. Introduction

One of the most important issues in global economy is the exacerbation of income inequality. Although the inequality is always a significant issue throughout history, it becomes extremely aggravated after subprime mortgage crisis in 2008. Governments and numerous international associations try to find the method to relieve income inequality in various ways. Cooperative is one of the suggested solution of income inequality. A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise.<sup>1</sup> As the fact that United Nations designated 2012 as the international year of cooperatives indicates, the interest in cooperatives is internationally increasing. Korean government and economic population also display interest in a cooperative. In 2012 the Congress legislated the Framework Act on Cooperative, which encourages establishment of cooperatives in Korea. After the enactment, 7280<sup>2</sup> cooperatives have been newly established for two and half years and numerous experts expect that the establishment will be increased further.<sup>3</sup> Especially, the decision-making system of cooperatives, which allows 1 vote per a member, has been expected to be a solution of income inequality. Furthermore, International Cooperative Alliance states that equality is one of the most fundamental value of a cooperative. Therefore, in current situation, a cooperative's effect on income inequality should be studied in-depth.

After the enactment of the Framework Act on Cooperative, studies on effects of cooperatives have been quantitatively increased. A cooperative is evaluated as a method to increase employment in Korea(Myunghun Paik, 2014) and also expected to be a key to activate local economy. (Junhyung Lim, 2013) However, there is no study which researches about the effect of a cooperative on the income inequality among members or related professions. In contrast, the correlation between income inequality and cooperative financial institution, which has a legally different form of enterprise from that of cooperative in Korea, was discussed. (Junghee Park, 2014) Therefore, the necessity of study on a cooperative and income equality among related professions is quite evident. This research is significant because it can contribute to the assessment of the function of cooperatives and indicate their future in Korea.

## II. Positive Research

### 2-1. Sample Selection

Most of cooperatives in Korea has a short history because most of them have been created after the enactment of the Framework Act on Cooperative in 2012. Therefore, the researcher cannot collect sufficient data, such as penetration rate of cooperatives in Korea, for analysis. In contrast, in agricultural field, there is

<sup>1</sup> International Cooperative Alliance

<sup>2</sup> Korean Cooperative Agency

<sup>3</sup> Kim, Doo-Nyeon, (2012) *Framework Act on Cooperatives :What are the Meaning and Issues Facing Us*, Korean society for cooperative studies 2012, Aug, 21-42

NACF, National Agriculture Cooperative Federation, which was established in 1969 based on the Act of National Agricultural Cooperative Federation. NACF is the largest agricultural cooperative in Korea and third largest cooperative in agriculture and food industry in the world.<sup>4</sup> Also, in 2014, the number of members of the cooperative is 2,350,502 out of 2,751,792 agriculture populations<sup>5</sup>, which means 85.4% of agriculture population is a member of NACF. Based on the assumption that NACF can represent the whole cooperatives in agriculture due to its size and long history, this thesis analyzes the case of NACF and the income inequality among agriculture households, which is expected to indicate meaningful assessment of the effect of cooperatives on the income equality of workers of industries.

However, NACF has a quite extraordinary characteristic. Unlike other kinds of cooperatives in Korea, NACF has business not only in agriculture but also in finance field. In fact, the bank of NACF is one of the biggest banks in Korea. Therefore, we also have to consider about the specificity of NACF, which can be quite different from other kinds of cooperatives.

## 2-2. Variables and Research Method

**Variables.** We have to quantify the growth of NACF, the income inequality among agriculture population and specificity of NACF. We should choose these variables are from 2000 to 2011 because we have to exclude the effect of other agriculture cooperatives which have been established after 2012.

**Growth of NACF.** To quantify growth of NACF, we use 3 variables: total sales, number of members, amount of investment per members.

**Income inequality among agriculture population.** To quantify income inequality among agriculture population, we use GINI coefficient<sup>6</sup> of agriculture population and mean log deviation.<sup>7</sup> Especially, mean log deviation is more influenced by data from lower-income population and it allows us to make a diversified research.

$$\text{GINI Coefficient} = \frac{1}{\mu n^2} \sum_i \sum_j |y_i - y_j|^8$$

$$\text{Mean Log Deviation} = \frac{1}{n} \sum_{i=1}^n \ln \frac{\mu}{y_i}^9$$

$\mu$  is arithmetic mean of agriculture population,  $n$  is total number, and  $y_i$  is an income of member  $i$ .

<sup>4</sup> World Cooperative Monitor 2013, International Cooperative Alliance

<sup>5</sup> National Agriculture Cooperative Federation management information

<sup>6</sup> The Gini coefficient, developed by the Italian statistician and sociologist Corrado Gini, is a measure of statistical dispersion intended to represent the income distribution of a nation's residents. A Gini coefficient of zero expresses perfect equality and A Gini coefficient of one expresses maximal inequality among values

In econometrics, the mean log deviation is a measure of income inequality. The mean log deviation is zero when everyone has the same income, and takes on larger positive values as incomes become more unequal, especially at the high end.

<sup>8</sup> Junki Park, Hanpeel Moon& Yongtaek Kim(2004)- *Decomposition of factors of income inequality of agriculture households*, rural economy 27, 15-27, Korea rural economic institute,

<sup>9</sup> Youngseogk Yoon, Byunghoon Lee&Junki Park(2013)- the age effect on income inequality of farm households, rural economy36, 33-51, Korea rural economic institute

**Specificity of NACF.** To quantify the specific characteristic of NACF, which has other kinds of business such as credit business, the researcher uses ratio of total sales in agricultural field to total sales of NACF. Through using this ratio, we can know the effect of NACF's concentration on its members, who work in agricultural field.

**Research method.** Based on the selected data mentioned above, we perform two studies by using correlation and regression analysis. First, to assess relationship between the growth of NACF and the income inequality among agriculture populations, the researcher calculates Pearson's  $r^{10}$  and p-value<sup>11</sup>. Through this we can evaluate the effect of each independent variables on each dependent variables. Variables about the growth of NACF are independent variables and those about the income inequality among agriculture population are dependent variables. The data – total sales of NACF, number of members of NACF, amount of investment per a member, GINI coefficient, Mean Log Deviation- are from 2000 to 2011. The analysis is done by Excel 2013.

Second, to assess the relationship between specific characteristic of NACF as a cooperative and income inequality of agriculture population, the correlation and regression analysis about ratio of total sales in agricultural field to total sales of NACF and income inequality of agriculture population is done.

### 2-3. Hypothesis

The researcher initially thought that the growth of the cooperative would reduce income inequality among agriculture population because of NACF's cooperative decision making system: 1 vote per a member. Therefore the hypothesis of the research is that the growth of NACF is negatively correlated with the income inequality of agriculture populations.

The second hypothesis of this research is that ratio of total sales in agricultural field to total sales of NACF is negatively correlated with the income inequality of agriculture population. This means that as NACF concentrates on other business area such as credit business, agriculture population suffers income inequality more. This hypothesis is based on the assumption that this kind of NACF's tendency indicates reduction of financial and systematic investment on its members.

**Hypothesis 1:** the growth of cooperatives will be negatively related to income inequality among agriculture population.

**Hypothesis 1a:** the growth of total sales of NACF will be negatively related to income inequality among agriculture population.

**Hypothesis 1b:** the growth of number of NACF members will be negatively related to income inequality among agriculture population.

<sup>10</sup> Pearson's  $r$  is a correlation coefficient which was invented by British Statistician K. Pearson(1857~1936.) This coefficient shows linear correlation between two numerical variables. The range of value  $r$  is from 0 to 1. The value between 0.7 and 1 indicates strong correlation among variables, the value between 0.3 and 0.7 indicates clear correlation among variables, the value between 0.1 and 0.3 indicates weak correlation and the value between 0 and 0.1 indicates meaningless correlation.

<sup>11</sup> P-value is a possibility that extremer result is observed than assumed result when one assumes that null hypothesis is right. The range of p-value is between 0 and 1. In this research, the researcher assumes that if p-value is lower than 0.05, the analysis is statistically meaningful.

**Hypothesis 1c:** the growth of number of NACF members will be negatively related to income inequality among agriculture population.

**Hypothesis 2:** the ratio of total sales in agricultural field to total sales of NACF will be positively related to income inequality among agriculture population.

## 2-4. Results

### Data

Year	Total sales <sup>12</sup> (100 million won)	Members	Investment (10,000won)	GINI <sup>13</sup>	Mean Log Deviation
2000	222277	2,382,000	94	.34	0.21
2001	431759	2,406,000	107	.35	0.22
2002	423810	2,405,000	108	.37	0.24
2003	410412	2,387,000	120	.38	0.26
2004	439982	2,373,000	132	.38	0.26
2005	461766	2,387,000	144	.4	0.28
2006	438980	2,399,000	154	.4	0.28
2007	499498	2,407,000	165	.41	0.31
2008	785750	2,422,000	183	.4	0.28
2009	875154	2,451,000	247	.41	0.3
2010	746320	2,448,000	300	.42	0.31
2011	680619	2,447,000	324	.43	0.33

**Table 1-Variables from 2000 to 2011**

Regression Analysis data	
Multiple R	.719626
R square	.517861
Adjusted R Square	.469648
Standard Error	0.026952
Observation	12

**Table 2- Total sales and Mean Log Deviation**

ANOVA						
	df	SS	MF	F	Significance F	

<sup>12</sup> National Agriculture Cooperative Federation management information

<sup>13</sup> Youngseogk Yoon, Byunghoon Lee&Junki Park(2013)- the age effect on income inequality of farm households, rural economy36, 33-51, Korea rural economic institute

Regression	1	0.007802	0.007802	10.74092	0.008326	
Residual	10	0.007264	0.000726			
Total	11	0.015067				
	Coefficients	Standard Error	t-stat	P-value	Lower 95%	Upper 95%
Intercept	0.199207	0.023919	8.328468	8.26E-06	0.145912	0.252501
HH size	1.39E-07	4.23E-08	3.277335	0.008326	4.44E-08	2.33E-07

**Table3- Total sales and Mean Log Deviation**  
 $y = 1E - 07x + 0.1992$ ,  $y = \text{Mean Log Deviation}$ ,  $x = \text{Total Sales}$   
**Equation 1-Linear regression of total sales and Mean Log Deviation**

Regression Analysis data	
Multiple R	.745944
R square	.556433
Adjusted R Square	.512076
Standard Error	0.019178
Observation	12

**Table 4-Total sales and GINI Coefficient**

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.004614	0.004614	12.54452	0.00534	
Residual	10	0.003678	0.000368			
total	11	0.008292				
	Coefficient	Standard Error	t stat	P-value	Lower 95%	Upper 95%
Y intercept	0.333832	0.017019	19.61476	2.6E-09	0.29591	0.371753
HH size	1.07E-07	3.01E-08	3.541824	0.00534	3.95E-08	1.74E-07

**Table 5-Total sales and GINI Coefficients**

$y = 1E - 07x + 0.3338$ ,  $y = \text{GINI Coefficients}$ ,  $x = \text{total sales}$   
**Equation 2-Linear regression of Total sales and GINI Coefficient**

Regression Analysis Data	
Multiple R	.66356
R Square	.440311
Adjusted R Square	.384342
Standard Error	0.029167
Observation	12



**Table 6-the number of members and Mean Log Deviation**

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.006693	0.006693	7.867074	0.018639	
Residual	10	0.008507	0.000851			
Total	11	0.0152				
	df	Standard Error	t-stat	P-value	Lower 95%	Upper 95%
Y intercept	-1.92952	0.784948	-2.45815	0.033783	-3.67849	-0.18055
HH Size	9.14E-07	3.26E-07	2.80483	0.018639	1.88E-07	1.64E-06

**Table 7-the number of members and Mean Log Deviation**

$y = 9E - 07x - 1.9295$ ,  $y = \text{Mean Log Deviation}$ ,  $x = \text{the number of members}$   
**Equation 3-Linear regression of the number of members and Mean Log Deviation**

Regression Analysis data	
Multiple R	.632004
R Square	.399429
Adjusted R Square	.339372
Standard Error	0.022301
Observation	12

**Table 8-the number of members and GINI Coefficient**

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.003308	0.003308	6.650827	0.027467	
Residual	10	0.004973	0.000497			
Total	11	0.008281				
	Coefficients	Standard Error	t-stat	P-value	Lower 95%	Upper 95%
Y intercept	-1.15959	0.60016	-1.93214	0.082143	-2.49683	0.177648
HH size	6.42E-07	2.49E-07	2.57892	0.027467	8.74E-08	1.2E-06

**Table 9-the number of members and GINI Coefficient**

$y = 6E - 07x - 1.1596$ ,  $y = \text{GINI coefficient}$ ,  $x = \text{the number of members}$   
**Equation 4- Linear regression of the number of members and GINI Coefficient**

Regression Analysis Data	
Multiple R	.849916
R square	.722358
Adjusted R square	.694593
Standard Error	0.020453
Observation	12

**Table 10-the investment per a member and mean log deviation**

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.010884	0.010884	26.01756	0.000464	
Residual	10	0.004183	0.000418			
Total	11	0.015067				
	Coefficients	Standard Error	t-stat	P-value	Lower 95%	Upper 95%
Y intercept	0.202466	0.015096	13.41193	1.02E-07	0.16883	0.236102
HH size	4.09E-08	8.03E-09	5.100741	0.000464	2.31E-08	5.88E-08

**Table 11-investment per a member and Mean Log Deviation**

$$y = 4E - 08x + 0.2025, \quad y = \text{Mean Log Deviation}, x = \text{investment per a member}$$

**Equation 5-the linear regression of investment per a member and Mean Log Deviation**

Regression Analysis Data	
Multiple R	.845279
R square	.714496
Adjusted R square	.685945
Standard Error	0.015386
Observation	12

**Table 12-investment per a member and GINI Coefficient**

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.005924	0.005924	25.02576	0.000535	
Residual	10	0.002367	0.000237			
Total	11	0.008292				
	Coefficient	Standard Error	t-stat	P-value	Lower 95%	Upper 95%
Y intercept	0.338548	0.011356	29.81145	4.22E-11	0.313244	0.363851
HH size	3.02E-08	6.04E-09	5.002575	0.000535	1.68E-08	4.37E-08

**Table 13-investment per a member and GINI Coefficient**

$$y = 3E - 08x + 0.3385, \quad y = \text{GINI Coefficient}, x = \text{investment per a member}$$

**Equation 6- the linear regression of investment per a member and GINI Coefficient**

### Interpretation.

**Total sales.** As total sales of NACF increase, mean log deviation also increases. Based on Table 2 and 3, we can conclude that the growth of NACF's total sales and Mean Log Deviation are strongly correlated ( $r=0.720>0.7$ ). Also because p-value is far less than 0.05, we can conclude that total sales of NACF have a meaningful effect on Mean Log Deviation.

Also, as total sales of NACF increase, GINI coefficient also increases. Based on Table 4 and 5, we can conclude that total sales of NACF and GINI coefficient are strongly correlated. ( $r=0.746>0.7$ ) Also because p-value is far less than 0.05, we can conclude that total sales of NACF have a meaningful effect on GINI coefficient.

According to correlation and regression analysis, we can conclude that as total sales of NACF grow, income inequality among agriculture population exacerbates, which is contradictory to hypothesis 1A. The difference between mean log deviation and GINI coefficient is not significant so there is no significant difference between low-income and mid or high income population about the effect of NACF's total sales.

**Number of members.** As the number of NACF members increases, mean log deviation also increases. Based on Table 6 and 7, we can conclude that the growth of the number of NACF members and Mean Log Deviation are clearly correlated ( $0.3 < r = 0.664 < 0.7$ ). Also because p-value is far less than 0.05, we can conclude that the number of NACF members has a meaningful effect on Mean Log Deviation.

Also, as the number of NACF members increase, GINI coefficient also increases. Based on Table 8 and 9, we can conclude that the number of NACF members and GINI coefficient are clearly correlated. ( $0.3 < r = 0.632 < 0.7$ ) Also because p-value is far less than 0.05, we can conclude that the number of NACF members have a meaningful effect on GINI coefficient.

According to correlation and regression analysis, we can conclude that as the number of NACF members grows, income inequality among agriculture population exacerbates, which is contradictory to hypothesis 1B. The difference between mean log deviation and GINI coefficient is not significant so there is no significant difference between low-income and mid or high income population about the effect of the number of NACF members.

**The investment per a member.** As investment per a member increases, mean log deviation also increases. Based on Table 10 and 11, we can conclude that the growth of investment per a NACF member and Mean Log Deviation are strongly correlated ( $r = 0.850 > 0.7$ ). Also because p-value is far less than 0.05, we can conclude that the amount of investment per a member has a meaningful effect on Mean Log Deviation.

Also, as the amount of investment per a member, GINI coefficient also increases. Based on Table 12 and 13, we can conclude that the number of NACF members and GINI coefficient are strongly correlated. ( $r = 0.846 > 0.7$ ) Also because p-value is far less than 0.05, we can conclude that the amount of investment per a member has a meaningful effect on GINI coefficient.

According to correlation and regression analysis, we can conclude that as the amount of investment per a member grows, income inequality among agriculture population exacerbates, which is contradictory to hypothesis 1C. The difference between mean log deviation and GINI coefficient is not significant so there is no significant difference between low-income and mid or high income population about the effect of the amount of investment per a member.

Correlation and regression analysis shows that the growth of NACF does not contribute to solve the problem of income inequality among agriculture population and even exacerbates it. So, the hypothesis 1 can be rejected.

## Data

Year	Ratio of total sales in agricultural field to total sales	GINI	Mean Log Deviation

	of NACF		
2000	.2130177	.34	0.21
2001	.1774003	.35	0.22
2002	.1687438	.37	0.24
2003	.1375268	.38	0.26
2004	.174253	.38	0.26
2005	.112516	.4	0.28
2006	.1153048	.4	0.28
2007	.116867	.41	0.31
2008	.0848082	.4	0.28
2009	.0842636	.41	0.3
2010	.1109381	.42	0.31
2011	.1151454	.43	0.33

**Table 14-Variable from 2000 to 2011**

Regression Analysis Data	
Multiple R	0.824698
R square	0.680127
Adjusted R square	0.648139
Standard Error	0.021953
Observation	12

**Table 15- Ratio of total sales in agricultural field to total sales of NACF and Mean Log Deviation**

ANOVA	df	SS	MS	F	Significance F	
Regression	1	0.010247	0.010247	21.26239	0.000964	
Residual	10	0.004819	0.000482			
Total	11	0.015067				
	Coefficient	Standard Error	t-stat	P-value	Lower 95%	Upper 95%
Y intercepts	0.375032	0.022948	16.343	1.53E-08	0.323902	0.426163
HH size	-0.75763	0.164306	-4.61112	0.000964	-1.12373	-0.39154

**Table 16- Ratio of total sales in agricultural field to total sales of NACF and Mean Log Deviation**

$y = -0.7576x + 0.375$ ,  $y = \text{Mean Log Deviation}$ ,  $x = \text{the ratio}$   
**Equation 7-Linear Regression of the ratio and Mean Log Deviation**

Regression Analysis Data	
Multiple R	0.862946
R square	0.744676
Adjusted R	0.719143
Standard Error	0.01455

Observation	12
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**Table 17- Ratio of total sales in agricultural field to total sales of NACF and GINI Coefficient**

ANOVA	df	SS	MS	F	Significance F	
Regression	1	0.006175	0.006175	29.16585	0.000301	
Residual	10	0.002117	0.000212			
Total	11	0.008292				
	Coefficient	Standard Error	t-stat	P-value	Lower 95%	Upper 95%
Y intercept	0.469777	0.015209	30.88768	2.97E-11	0.435889	0.503665
HH size	-0.58811	0.108899	-5.40054	0.000301	-0.83075	-0.34547

**Table 18- Ratio of total sales in agricultural field to total sales of NACF and GINI Coefficient**

$$y = -0.5881x + 0.4698, y = \text{GINI Coefficient}, x = \text{the ratio}$$

**Equation 8- Linear Regression of the ratio and GINI Coefficient**

### Interpretation

*Ratio of total sales in agricultural field to total sales of NACF.* As ratio of total sales in agricultural field total sales in NACF decreases, mean log deviation increases. Based on Table 15 and 16, we can conclude that the ratio and Mean Log Deviation are negatively strongly correlated ( $r=-0.825<-0.7$ ). Also because p-value is far smaller than 0.05, we can conclude that the ratio has a meaningful effect on Mean Log Deviation.

Also, as ratio of total sales in agricultural field total sales in NACF decreases, GINI coefficient increases. Based on Table 17 and 18, we can conclude that the ratio and GINI coefficient are negatively strongly correlated. ( $r=-0.863<-0.7$ ) Also because p-value is far smaller than 0.05, we can conclude that the ratio has a meaningful effect on GINI coefficient.

According to correlation and regression analysis, we can conclude that as ratio of total sales in agricultural field total sales in NACF grows, income inequality among agriculture population reduces, which is consistent with hypothesis 2. The difference between mean log deviation and GINI coefficient is not significant so there is no significant difference between low-income and mid or high income population about the effect of ratio of total sales in agricultural field total sales in NACF.

### III. Conclusions

The result of the analysis refutes the first hypothesis that the growth of NACF does contribute to solve the problem of income inequality among agriculture population. This result is directly opposite to prevalent assumption that democratic decision-making system can reduce income inequality among members because of majority rule, which is opposite to a shareholder system. This research indirectly indicates that cooperative system is not always a solution for income inequality.

However, it's unreasonable to generalize NACF's case to all cooperatives in Korea. This is because NACF has its specificity. As table 14 shows, the ratio of total sales in agricultural field total sales in NACF is only 10~20%. NACF has focused on credit business for a long time, which means it does not focus on agricultural area primarily. But most of NACF members work in agriculture area. Therefore, we can

conclude that NACF does not completely care about its members and their economic well-being.

The case of NACF suggests that a cooperative has to concentrate on a business area which its members work in. If a cooperative does not care about the proper business, even the growth of a cooperative will exacerbate economic well-being of its members as the case of NACF shows. This research implies a significant point that a cooperative should focus on economic well-being of members, not mere profits.

The study has limitation that it does not consider other factors such as aging effect which have exacerbated income inequality among agriculture population in Korea. In fact, numerous factors such as aging effect, government policy, FTA are suggested as causes of income inequality among agriculture population in Korea. Therefore, further studies which consider those factors and then apply to the case of NACF are needed.

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## **Consumer Centered Management and YouKe**

“Leading successful 10 million “Youke” generation in Korea by employing Consumer-Centered Management”

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### **Abstract**

This article is on the topic of Consumer Centered Management (CCM) and YouKe. On one side of the coin, Korean economy is in a seemingly favorable economic ambiance. Korean economy is successfully getting to the “10 Million YouKe Generation”. Yet, if one flips the coin and take a careful look at it, it is not that auspicious. In fact, according to the research on “The Actual Condition of Foreign Visitors” conducted by Korea Culture & Tourism Institute in 2013, YouKe’s overall satisfaction level was 4.11, which is lower than the average level (4.15). Such a low satisfaction level triggered strikingly low visit rate of 30%. As fervent patriots, we were encouraged to identify the causes that contribute to low level of revisit, low satisfaction level, and come up with a solutions to retain “Big Hands” of the economy. Using Weibo, a widely used Chinese survey webpage, we conducted a survey to find out current situation. The participants of the survey ranged from Beijing University students and people living in the local community. The survey entailed three questions: The first question was what do you expect the most about Korea. The second was what did you enjoy the most while you were in Korea. Last but not least, the third was what made you disappointed the most in Korea. The survey denoted that YouKe were primarily interested in shopping and the predominant dissatisfaction source was the price and language barrier. The suggested solutions are using 4P’s, Price, Place, Product, Promotion, SWOT, PEST analysis and comparing date with our formula. Due to declining declining exports, mainly due to depreciation of Yen, domestic demand, and MERS, Financial Services Commission has decreased expected rate of economic growth of Korea from 3.7% to 2.8%. Korea is currently in a recessionary gap. This research paper hopes to address and provide solutions to current problems of Korean economy.

Marketing Formula:  $f(x) = \frac{G+A}{N}$

## I. Introduction

“of the people, by the people, for the people” is a renowned adage that supports the norm that the center of the company’s management is human. Therefore, the ethical management is the most basic and competitive edge. Today, the number of Youke(a neologism for Chinese tourists) is constantly increasing. In 2014, approximately 6 million Youke had visited Korea. This number of Youke is considered to have created similar positive influence on Korean economy with the revenue earned by exporting seven hundred thousands automobiles. The total number of Youke visiting Korea is, fortunately, continuously increasing every year, while the rate of revisit is only 30% and, unfortunately, falling every year. If the rate of revisit falls ceaselessly, then the total number of Youke in Korea will accordingly decrease in the future. Hence, it is essential to prevent the decrease in the rate of revisit because decline of the number of Youke will influence the Korean economy harshly. Currently, companies and governments strive to diversify goods and services because they assume that the high diversity of goods and services would attract more tourists, especially Youke, to visit Korea. However, in our opinion, only realization of Consumer-centered management can truly contribute to an increase in the rate of revisit of Youke. According to the preliminary surveys, Youke have experienced inconvenience and faced myriad of difficulties because of communication problems. If firms and government do not solve such fundamental yet crucial problems as communication problems, then the number of Youke visiting Korea will gradually and incessantly decline every year, though companies diversify their goods and services in order to expand their customer bases. Thus, throughout this research, we, as fervent patriots, tried to find the fundamental reasons for the reduction of the rate of revisit, come up with solutions to prevent the reduction and find a way to increase the not only the nominal number of Youke but also its revisit rate in order to act as a “navigation” for Korean economy to attract more Youke by fulfilling their needs and benefit from increasing number of Youke.

## II. Background Information

Consumer-centered management, also known as CCM, is improving its management activities and reorganizing all of its activities with a focus on customers. Most managers today agree with the norm that they must concentrate their efforts on growing the lifetime value of their customer relationships. There are tons of ways of adding to overall customer equity, including building loyalty and retention and cross selling related goods and services to fulfill more of customer’s needs. The purpose of Consumer centered management is to defend the right of consumer and spread the culture of consumer based management in order to increase competition among companies and to increase the consumer surplus. The effect of Consumer Centered Management is that companies, with a more customer-oriented perspectives, innovate the quality of products and services which leads to greater competitiveness; consumers gain provision of the information necessary to choose products and services and reach prompt and reasonable resolution of disputes arising between customers and the company; public saves tons of cost of dispute resolution and corrective action.



### III. Main Body

This research was conducted in order to answer the inquiry: “Could we predict the demand of Youke and comfort them when they travel by employing novel means of the management?” As aforementioned, currently, there are lots of Chinese coming to Korea each year. Yet, the problem is that their revisiting rate is strikingly low. However, we certainly need Youke in order to boost our economy. So far, researchers have only conducted surveys on Youke who already came to Korea for specific reasons and might not have stayed in Korea long enough to fully realize the downsides of Korea. However, we studied based on both who have been to Korea and those not in order to lead our research to an accurate result. This research specifically targets to help Korean economy achieve economic growth and retain ‘big hands’ of the economy to ensure sustainable development.

The number of “ Youke”, Chinese tourists, coming to Korea has increased four times since 2008 from 1.16million to 4.32million. In 2012, it was sensational issue that the number of Youke visiting Korea was grater than that of Japan. Furthermore, the average expenditure of Youke also has increased 80% from 1.3million won in 2008 to 2.36million won in 2013. According to the Incheon International Airport, last year (2014), 64% of Youke spent more than \$500 per person on average and more than 60% spent on shopping. Thus, this result actually reveals that the Duty Free Shop gained a big benefit.

According to the statistics conducted by the Incheon Airport, cosmetics and perfume accounted for approximately 35% to 38% of the Youke’s shopping list. Thus, the number of people visiting Duty Free Shops such as Amorepacific or LG Household & Healthcare exceeded the number of store-to-store visitors. These results also changed the map of Duty Free Shop. Recently, cosmetics shops begin to expand and are being located at the center of the airport.

Beside cosmetics items, Korean baby products also captivated Chinese tourists. Korean TV programs and its pop culture became popular in China. The products that appeared in the advertisements or television programs began to grab Chinese people’s attention. Additionally, Korean baby-sitting program captured Chinese mind that they began to spend money on Korean baby products. All in all, it was apparent that Korean pop culture, which is well known as K-Pop, plays a pivotal role in boosting Korean economy. However, as Japanese currency, yen, depreciated, many Chinese tourists are going to Japan, Thailand, and Taiwan. U.S. famous cosmetics company, Estee Lauder, for instance, epitomize the reason why Chinese tourists are heading to Japan. ‘Advanced Night Repair 100ml’, the representative good of Estee Lauder, is being sold at 198,536 won in Korea but it is being sold at 149,400 won at Japanese Narita Airport. The same good was 33% more expensive in Korea. Thus, if this tendency continues, Korean economy might lose even more Chinese tourists.

In order to prevent this incident from taking place, our Duty Free Shop is promoting special events to grab tourists. As many other countries do, Korea, especially its Duty Free Shop, should seek for some new ways retain “big hands” of the economy.

According to the Chinese biggest searching engine Baidu, its big data showed an interesting result. Its statistics showed 67% of Chinese who search about Korea was, in fact, male. In contrast, people who search about Korean Tourism were female; among people who are interested in Korean Tourism women accounted for approximately 55%. Chinese at the age of between 20 and 30 found the biggest interests toward Korean tourism. The city that showed the greatest interest was Beijing and it was followed by Zhejiang, Shanghai, Guangdong and Shandong. The eastern-coast city showed great interest while the western cities showed less.

One of the most surprising facts was that among tourists coming to Korea, the number of people who prefers FIT, which stands for Free/Foreign Independent Tour, is increasing. According to the Ministry of Culture, Sports and Tourism 2013 research on the actual condition of the foreign tourists, 60% of Youke prefer FIT and it is still increasing. It is noteworthy that most of them are female at the age of between 20 and 30, and that their consuming pattern is changing. Most of Youke are using their electronic devices to plan to do a tour and go shopping. Duty Free Shop is still the biggest shopping mall that earns the largest profits from the Chinese tourists, but in the near future, Chinese people would go outside the Duty Free Shop and would rather go to the small-scale shops for their gratification. Thus, the importance of Social Network System became significant. Subsequently, it is advisable that Korean government and its company put more efforts on optimizing the usage of marketing activities related to SNS.

Nowadays, many Korean companies are actually using Chinese Twitter called Weibo or Chinese Kakao Talk called Weixin to have a natural communication with potential Chinese tourists. By doing so they also promote diverse events and reinforce their company images at the same time. As main tourists coming to Korea are becoming younger and younger, the necessity of establishing improved SNS platform and online marketing seem impending. By using its platform potential travelers might check their tour schedule and they might gain some important facts immediately regardless of their location, which might increase the utility. All in all, it is true that Youke's influence became really significant that it actually impacts Korean economy every single time. As Chinese still prefer the products written with "Made in Korea," Korean companies should follow their spending pattern to maximize their profits.

#### **IV. Research Method**

By conducting the research, we wanted to first answer 1. Why did Chinese travelers (Youke) come to Korea? 2. Were the Youke satisfied with their trips in Korea? 3. What parts do Koreans, especially the Ministry of Culture, Sports and Tourism need to improve in order to maximize satisfaction level from those travelers? Even though these three questions look simple and easy, it was not an easy task. It was obviously difficult to determine the number of people we need to ask for our research. Below 100 was too small and above 1000 was too many and seemed really demanding. We found 500 would be appropriate for our research. Then, we also pondered whether which way is better: having a direct interview or asking our inquiries through online websites. Finally, we found that using an online websites would be better since we wanted to cover various kinds of people who live in different provinces or cities in China. However, doing so seemed risky and fallacious. People could answer the question without sincerity, because they could answer anonymously. Moreover, considering that people sometimes show very inactive participation, and it is usually unclear which segment of the population is responding, the survey could result in nonresponse bias at the same time. We also worried that our survey could have undercoverage bias since there would be some people who do not have any devices that can access to the Internet, thus disregarding their valuable opinions. Notwithstanding, in order to reduce the probabilities to commit those bias, we utilized the most widely used Chinese survey website that many researchers actually use when conducting researches.

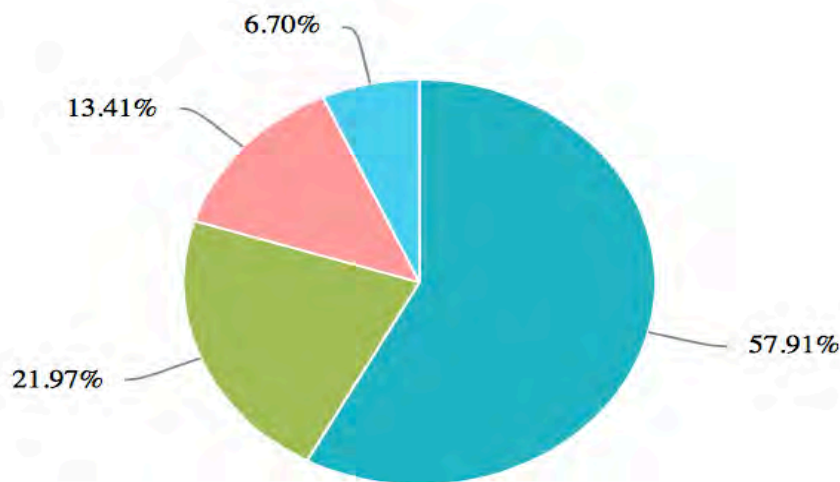
Furthermore, we made sure that only Chinese could respond to the survey by not allowing people from nations other than China to participate in the survey. Reducing the probabilities of allowing biases in the research was rather demanding. In addition to this, in order to conclude the paper with more accurate result, we

also applied “Big Data” method. Keeping in mind that we are living in a Big Data society where lots of information exists, we can easily predict the future by analyzing those data. However, as high school students, we lacked ability to analyze the magnificent amount of data. Thus, we planned to organize the information that we gained from Chinese people and compare the result with already analyzed data from open sources through online. It seems really challenging but we really wanted to answer the inquiry mentioned above and we thought it would be more accurate if we were to apply the Big Data analyzing method here.

To guarantee accuracy, the survey was conducted by asking arbitrarily chosen subjects on randomly chosen date. The survey asked the test subjects several questions regarding trips to Korea. The survey was conducted in local community and prestigious Chinese university including Qinghua, Beijing, and Renmin by using the Chinese Internet survey webpage called weixin. 537 participants of this survey were inquired three questions. : The first question was what do you expect the most about Korea. The second was what did you enjoy the most while you were in Korea. Last but not least, the third was what made you disappointed the most in Korea. The first question was asked to both those who have visited Korea and those who have not visited Korea. The second and the third question specifically inquired people who have travelled to Korea.

V. Results

你对韩国最期待的是什么？  
答题人数 537



The first question was “What do you expect the most about Korea?” As we expected, Chinese tourists, Youke, showed a great knack for shopping. The vast majority of Youke, approximately 57.91%, expected to enjoy shopping when they visit Korea. The second dominant expectation, with 21.97%, was sightseeing. The third and fourth 13.41% and 6.7%, respectively, were relaxation and food. Apart from Hong Kong, tourists often go abroad for relaxation and

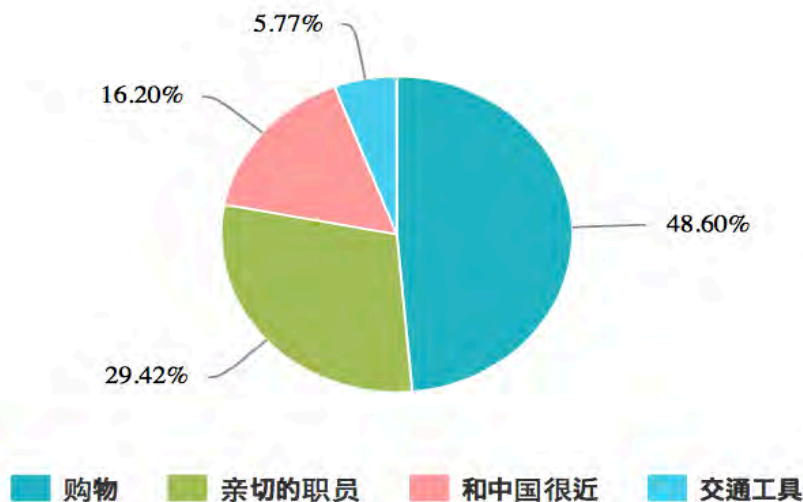
sightseeing. Yet, Youke's dominant expectation was shopping as well. This result reveals that Korean economy should meet Youke's expectation level to retain the "big hands" of the economy.

Korean economy should not rely heavily on one domain because doing so can trigger an economic damage. Demand for goods and services are vulnerable to changes. Price elasticity of demand, income elasticity of demand, cross elasticity of demand, for example, can affect shopping industry positively or negatively. Yet, when the industry, on which Korea is heavily relying, declines, the whole economy might enter into a recession. Therefore, it is advisable that Korea economy meet Youke's expectation and that diversify profit sources.

As mentioned above in the abstract, the satisfaction level regarding trips in Korea was lower than the average level. This satisfaction undoubtedly leads to revisit. Hence, it is crucial to maximize satisfaction level and to meet Youke's expectation in order to retain "big hands" of the economy.

## 你在韩国旅游的时候，你最喜欢的是什 么？

答题人数 537



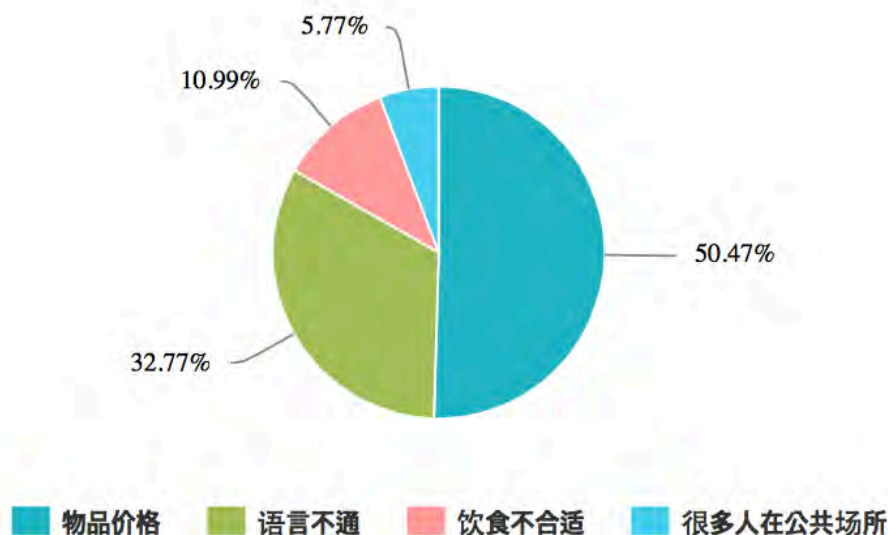
The second question was "What did you like the most about Korea?" About the half of survey participants identified shopping as the predominant satisfaction factor. One third of them identified kind and gentle clerks as their satisfaction factor. The third and fourth satisfaction factor, with 16.2% and 5.77%, respectively, were geographical proximity and well-organized public transportation.

In order to increase satisfaction level, it is extremely important to reinforce and ameliorate factors that contribute to satisfaction. In order to increase satisfaction level with shopping, firms should diversify their goods and services and enhance their merchandises' quality. To increase satisfaction level of Youke from gentle clerks, governments can subsidize training service, and firms can devote more of their time, capital and efforts on hospitality training. Though not the predominant factor, public transportation is also a contributing factor to satisfaction. In China, public transportation is not well developed. In fact, there are a myriad of cities that do not have subways. China has proposed 50-year plan to construct train that connects all parts of China. Yet, since it

would take a long period of time, Chinese would not be able to experience convenient forms of transportation in their home country. Korea, in contrast, has a number of forms of transportation that even inform passengers of destination information in various language including Korean, English, Japanese, and Chinese. However, it has negative sides. Many foreign tourists stated that the transportation in Korea is so complicated that it is challenging for them to understand. What is worse is that Korea is constantly facing problems regarding illegal taxis. From January 17<sup>th</sup> 2014, Korean administration is cracking down on illegally operating call-van drivers. Yet, there are still a number of unethical and immoral drivers who illegally charge money. Korean government ought to extirpate such practices prevalent in airports and major stations.

### 你在韩国旅游的时候，你最不满的是什 么？

答题人数 537



The last question that the survey inquired was what made you disappointed the most about Korea. The principal dissatisfaction factor was the price of goods and services provided in Korea. Slightly more than 50% identified the cost as the most disappointing aspect. The second chief dissatisfaction factor, with 32.77%, was the language barrier. The third and fourth discontent factor, 10.99%, and 5.77%, respectively, were food and overcrowded places.

It is noteworthy that food was included in one of the Youke's expectations. Yet, food was the dissatisfaction factor. This fact can denote that Korean food did meet Youke's satisfaction level. Moreover, it is an irrefutable fact that the most fundamental component of foreign travel is language. Yet, employees in shops could barely speak in Chinese.

As deeply concerned patriots, our members were greatly concerned about current situations regarding revisit rate of "big hands" of the economy. One of the widely adopted marketing strategies, marketing mix, reveals that getting the right product, to the right place, at the right price, with the right promotion is the key to

success. Often referred as 4ps, product, place, price and promotion are indisputably indispensable in businesses. Korea might have the right product----cosmetic items, place---- proximity, and promotion----advertisements and a myriad of special offers. Yet, Korea does not have one p, the price. Law of demand denotes that either an increase or decrease in price can greatly affect quantity demanded. The major good that Korea targets to sell to Youke is cosmetic items. Yet, such industry has a number of competitors in the economy. Thus, firms should consider cross elasticity of demand and price elasticity of demand when they engage in setting the price of goods to expand customer base and attract potential customer.

It is imperative that Korea Culture & Tourism Institute do SWOT analysis to boost revisit rate of Youke. Korea currently has Strength, Weaknesses, Opportunities and Threats. By intensifying our strength---- convenience, ameliorating weaknesses----language barrier and pricing strategy, seizing our opportunity--=- increasing number of Youke, and eliminating threats----lower level of revisiting rate, Korean economy would be capable of increasing revisit rate, boosting economy and increasing GDP per capita.

It is also advisable to use PEST analysis to increase revisit rate. Korea and China have a favorable political ambience through Korea-China FTA. China is achieving a great degree of economic growth. As real GDP per capita in China increases, more people would visit Korea and contribute to an increase in Korean economic growth. With the Middle East Respiratory Syndrome Corona Virus (MERS) prevalent in Korea, both domestic demand and foreign demand declined. Should this situation be prolonged, Korean economy would fall. Social factor is not promising. In fact, the Korean Tourism Organization stated that the number of foreigners who cancelled their visits to Korea is over 45000 and that 2000 Chinese tourists and 500 Taiwanese cancelled their plans to visit Korea through travel agencies. The Ministry of Strategy and Finance announced that the MERS increased uncertainty in the economy. Morgan Stanley, a representative investment corporation in the U.S. predicted that if the MERS continue for a month, economic growth rate of Korea would fall 0.15%. Social factors are not positive as well. Youke are reluctant to visit Korea and meet Koreans. Technological development contributes to increasing number of sales. As penetration rate of smartphones increases at a rapid pace around the globe, Korean shops came up with applications that facilitate their business. KaKao Talk, one of the most widely used communication apps in Korea, for instance, provides businesses with an opportunity to communicate, in any language, with potential consumers.

## VI. Equation

$$\text{Marketing Formula: } f(X) = \frac{G+A}{N}$$

G: gender (Female: 2g / Male: 1g)

A: age (25 or less: 0.2a / 25 to 40: 0.4a / 40 or more: 0.4a)

N: negative influence (disease or natural disasters that affect EVERYONE: 5n / economic influences (depreciation of other currency such as Yen) 3n / individual dissatisfactions that affect revisiting rates\_ negative impact: 2n)

Since the major consumer base is female, Female's G is 2. Generally, Female accounts for 70% of people who visit Korea while Male accounts for 30%. Female spends approximately two times more than do male. Male's chief purpose of trip is for business.

For A, most People at the age at between 25 and 40 are single and thus have fewer burdens with consumption. People older than 40 are mostly from family groups.

For N, if things such as but not limited to natural disasters that affect EVERYONE in the society happen, the formula is divided by five. This is mainly because MERS, for example, discourage people from visiting. For economic factor, the formula is divided by 3. As mentioned in duty free shops, depreciation of Yen discourages Youke from visiting Korea and encourage them to visit Japan. But if visitors are dissatisfied, the formula is divided by 2 instead of 3 because there are some still profits in local areas.

Usage: Divide the time period in to 1 month, 3 month, and 6 month. Then, draw slopes of 3 graphs regarding the number of visitors and the expenditure of visitors. Identify whether G or A is higher and interpret the graph. When the inappropriate factor is ameliorated, the marketing will succeed. In fact, for N, there are many differences between every single individual, so divide the formula by N. A positive number divided by positive number is positive, and a negative number divided by a positive number is negative. So, the shape will not change much. Yet, the number should be identified, compared and analyzed. By looking at G and A, firms should focus on Consumer Centered Management (CCM) and increase the rate of revisit.

This formula might be deemed as a common sense. Yet, what should be emphasized is that firms should do marketing FOR consumers. If firms pursue their own profits all the time, Korean economy might see the negatively sloped graph all the time.

## VII. Conclusion

All in all, our question "Could we predict the demand of Youke and comfort them when they travel by employing novel means of the management?" could be answered by our research. According to our research result, we could have recognized the fact that the products preferred by Chinese tourists "Youke" are still unexpectedly changing. In addition, their favorite items are shifting based on Korean pop culture. However, their pursuits are slightly different with those of Korean. Hence, we should keep an eye on their likings so that we can meet their demands. By doing so we would be able to bring not only Chinese tourists but also travelers from other nations such as but not limited to Taiwan, Japan or Thailand, which would be tremendous pleasure to our economic situations. Nonetheless, as interests toward Korea became bigger and bigger, it became little burdensome to create and provide unique travel package for travelers.

According to our survey, more than 50% of Chinese travelers expect to purchase Korean items from Korea and about half of Youke felt satisfaction and said they met their expectation. Specially, at this moment, the role of individual merchants became really important. Considering travelers usually go to small shops to buy goods, we should consider applying some special marketing technique especially those small shops on the road. Currently, however, Youke shows unprecedented consuming pattern as well. They tend to purchase expensive artworks. As people accumulate more wealth, they tend to spend a greater proportion of their incomes. And those wealthy Chinese people tend to visit Korea since it is geologically close so that they do not need to spend lots of time just for moving. Bearing in mind that art works usually show uniqueness, Chinese travelers, known

as 'big hands' of the economy, often go to the auction house and bid for the artworks. This also seems to draw another paradigm for tourism marketing. Just like this, it is extremely difficult to foresee their consuming pattern. Economy experts are also struggling difficulties living up to visitor's expectations.

However, it is possible for us to meet their expectation if we analyze and organize thoroughly their consumption tendency. Then, we would be able to meet the demand of Youke and comfort them. Keeping in mind that they show different pursuits every year, we need to develop a mobility plan. By using consumer-centered management, we might continue captivating Chinese tourist "Youke", whom are welcomed by many other countries not only in our country. If we succeed to grab their attention and increase the revisiting rates, which will ultimately results in retaining 'big hands' of the economy, then, Korean economy will boost and would be able to find positive influence in the near future.

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# **The Research about the Possibility of Success of Chinese Human-based Management and the Relationship with Jiu Ling Hou(90后) Generation**

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## **Abstract**

The purpose of this analysis is to study what Chinese human-based management is and its potential influence coincident with the advent of new Chinese generation. Human-based management is a business model that regards workers as the subject to increase both workers' satisfaction and overall outcome of the company. "The subject" is that the policies of a company rely more on dignity of the workers rather than profitability only, which is a very different approach of human resource management from other management strategies that regarding human resource as just one of the factors in production, such as machineries or computers. There have been numerous developed countries which have successfully implemented this type of management. This study discusses the history of human-based management and its characteristics. Some management models related to this type of management have been closely examined in details. As a result of this analysis, a number of factors have been recognized, including the presence of the Chinese style of human-based management, the distinction from western countries, and so on. In conclusion, depending on the research of human-based management and future perspectives, this analysis questions the possibility of whether or not Chinese companies that utilize human-based management can achieve success in today's world, and further draws an inference that how much they can influence other businesses when this type of management coincident with the advent of 90 Hou generation, which is the new generation of China.

**Keywords:** Human-based management, 90 Hou Generation, People-oriented management

## **I. Introduction**

### **Purpose of Study**

Businesses play a pivotal role in a whole cycle of domestic economic activity with government and individuals. In order for these businesses to develop and make the economic cycle more lubricated, businesses require continuous and innovative means of management strategies, such as managing workers in different ways, modifying physical resources, and improving their production lines. Despite the fact that all of these factors are equivalently important, how to manage people is always difficult due to uniqueness nature of people. Accordingly, what entrepreneurs ought to do is to wisely manage these human resources. Nevertheless, since there are numerous factors should be considered in one's business, including market failure, benchmarking failure and so on, innovative forms of management strategy cannot perfectly guarantee the success of businesses. In today's society, people-oriented management, human-centered management, or human-based management is

a fashionable trend in the modern business world that regards workers as the number one priority instead of materials and outcomes. The most distinctive factor of this style of management is that it is different from other management models which sometimes ruin and ignore dignity of people due to material-oriented ways of thinking. Throughout history, China has been known for its unique characteristic, which is unpredictable due to its special cultural background. This research started with searching the companies that implemented this type of management. The purpose of this research is to conduct an examination about the instances of this type of management model throughout the world; to formulate the difference between the Chinese management style and the western management style; to have a view when the Chinese human-based management coincides with the advent of new Chinese generation, called as 90 Hou Generation.

## II. Main Body

### Definition of Human-based Management

In contemporary society, in every single management model, dealing with their human resources is an essential factor in their businesses. However, there are some of management styles which choose to implement new approach toward their workers, such as people-oriented management, human-centered management and human-based management. These style of management depend more on dignity of people rather than materials only, due to the fact that utilizing this type of management can naturally resulted into an increase in sales and worker satisfaction rate.<sup>1</sup> Albeit they have different terms, their management philosophies are almost identical from one another. However, in this research, the writer would differentiate the terms through defining that human-based management is the proper term for describing Chinese style of this management model for the following reasons.<sup>2</sup>

**A literal translation of Chinese characters.** In China, the management style of regarding people as the core of businesses has been known as ‘人本管理’ (Ren Ben Guan Li)<sup>3</sup>. Nonetheless, in this research, the Chinese style of this type of management is more proper to be defined as ‘human-based management’ due to a literal translation from the Chinese characters. According to the inscriptions on bones and tortoise carapaces, the word ‘人’(Ren) symbolizes a man who bend his waist to labor. However, the interesting fact is that even though there are many different physical positions, including laying oneself down and standing erect, the word ‘人’(Ren) clearly shows human has been the resource for physical labor throughout history by representing the image of a man who labors. The word ‘本’(Ben) symbolizes the root of a tree, which stands for a fundamental basis or a cornerstone. The word ‘本’(Ben) is the combination of the word ‘木’(Mu) and ‘一’(Yi). The word ‘木’(Mu) is a image of a tree. With a line of ‘一’(Yi), it means a root of a tree, which is a well-known symbol of a foundation and basis due to its importance in anchoring a tree. Furthermore, the word ‘人本’(Ren Ben) is a shortened term of ‘以人为本’(Yi Ren Wei Ben), which means ‘to make human as the basis’. Accordingly, in order to accurately

<sup>1</sup> Chen Ling Yu, Yang Xiao Hong.(2014). Analysis about human-based management philosophy of an enterprise. *Management Manager*.

<sup>2</sup> Liu Jian Li.(2006). The research about the human-based management of Chinese state-owned enterprises. *Zhong Yang Min Zu Univeristy*. doi: 10.7666/d.y864073

<sup>3</sup> The Chinese term for human-based, people-oriented, or human-centered management

translate from Chinese characters, human-based management is the more appropriate term.<sup>4</sup>

**Cultural background and features of oriental and western humanism.** In the case of human-based management, people-oriented management and human-centered management, it emphasizes the humanistic approach in the company management process. However, humanism is an extremely broad term because the definition of humanism has been changed according to the different eras and philosophical perspectives. Despite its ambiguous feature, the majority of humanistic approaches desire uniqueness nature and dignity of human. In the business world, humanism can be interpreted as the philosophy focuses on dignity and individuality of the workers. Throughout oriental history, the origin of humanism began with traditional Chinese ideologies. Amongst Chinese ideologies, especially Confucianism, Confucius<sup>5</sup> didn't actually determine whether human is instinctively good or evil. However, he emphasized the importance of education and humanism due to the fact that these factors can heavily influence a characteristic of human. Furthermore, Mencius<sup>6</sup> was heavily influenced by the nature itself through forming a connection with natural phenomenon to human, such as a flow of water from up to down. Including these two Chinese ideologies, many Chinese ideologies tried to understand humanistic nature of people whether it is good or evil and what people should do in order to achieve humanistic success and achievement. Specifically, Confucianism was dependent on the principle, 'Cultivate your morals and then manage the family and then rule a nation and the world(修身,齐家,治国,平天下)'<sup>7</sup>, which means that one's educational basis can be a strong foundation for a group. Since Confucius has been a highly influential figure, this principle of Confucianism became the main educational philosophy in China. This could be shown by many Chinese educational materials which include a number of phrases come from the Analects of Confucius(论语). Consequently, the Chinese style of humanism virtually focused not only on the democratic property but also the stability of a whole group, which means that individuals and their educational basis could be the foundation to achieve the solidity of a group. On the contrary, western humanism had a different cultural background and features from oriental humanism. Western humanism has been influenced by many movements, such as Renaissance and Solidarism. To elaborate, during Renaissance, western countries made the shift of power from the presence of gods to human themselves through taking advantage of the creation of new style of literatures and the arts. This revolutionary movement allowed western people to recover human rights and their individuality from a divine being. Moreover, it triggered the studies and researches related to pragmatic science and technology which can be proven with concrete evidences. As a result, western humanism made people more focus on people-oriented added value, including ideas, thoughts, and so on. For another instance, in Catholic economics doctrine, such as solidarity and solidarism<sup>8</sup>, man is created in the image of the divine, and as such has innate curiosity and the natural drive to express him or herself through his or her labors. In this respect, the

<sup>4</sup> Shi Ding Guo, Luo Wei Dong.(2009). *The wisdom of Chinese characters*. China: Beijing Language and Culture University.

<sup>5</sup> Confucius(551-479 BC) was a Chinese teacher, editor, politician and philosopher during Spring and Autumn period of Chinese history.

<sup>6</sup> Mencius(371-289 BC) was an Chinese philosopher and sage, and one of the interpreters of Confucianism.

<sup>7</sup> Duan Shao Jun. (2006). Cultural tradition of Chinese ideology of human-based management philosophy. *Qiu Suo*. 170-172.

<sup>8</sup> Heinrich Pesch (1854~1926), the German economist who claimed solidarism, he mentioned that society is 'a union of many' instead of 'a unity of oneness' in his book, which emphasized the importance of uniqueness nature of people and solidarity of a group.

western style of people-oriented management is extremely individualistic. Therefore, due to its comparatively different characteristics and goals between oriental humanism and western humanism, it is more correct to define the Chinese style of people-oriented management as ‘human-based management’ in order to differentiate two different cultures.

### **The Advent of Human-based Management**

There have been three major stages or ‘waves’<sup>9</sup> which have influenced society throughout history. The First Wave was the period when people’s lives were heavily relied on agriculture practices. After almost 10,000 years, the Second Wave made society to become industrialized and mechanized. The problem was that human rights and dignity of man were ruined or violated for mass-production and mass-consumption during the Industrial Revolution. Due to this phenomenon, there have been great clashes and conflicts between employers and employees. After the First Wave and the Second Wave, the Third Wave changed our society from the industrial society to the information-oriented society. This transformational phenomenon revolutionized the way of accumulating wealth.<sup>10</sup> The reason for this was because the information-oriented society is based on ideas, knowledge, and creativity rather than physical labor. At the same time, as this phenomenon coincided with a population bulge of the world, interpersonal conflicts has been increased due to highly packed social structures and social stratification. In this respect, businesses ought to change the way of managing their workers as well. Thus, since resolving the conflict requires an understand of the attitudes, values, and beliefs of the parties involved in the conflict, some form of management have appeared to resolve this problematic phenomenon, including human-based management.

### **Features of Human-based Management**

In this type of management, which regards workers more than just one of the factors in production, the businesses have to consider several factors, such as ability, interest, and mentality of their workers. This comprehensive means of management can contribute to the development of a high-quality company culture. In addition to this, under human-based management, it allows workers to have activeness and productivity. The fundamental difference to other kinds of management is that there are five characteristics of human-based or people-oriented management. Firstly, it improves the quantity and quality of communication, when it takes place. Secondly, workers participate in a company’s management process. As workers are able to communicate with the board members, they can solve the problems immediately through discussing those issues. By participating in the company’s management process, the workers can work with a sense of ownership. Thirdly, workers start to do self-management. Due to a formation of a sense of ownership, the workers begin self-management of their company. Fourthly, it involves employee education and high-quality training system, since education and training allow the companies to develop their human resources through upgrading necessary knowledge and skills, which can establish a strong foothold for the development of a company. Lastly, it establishes a good corporate culture. Thanks to the self-management of educated workers, it can build up unique corporate culture to make workers enhance the power of unity.<sup>11</sup>

<sup>9</sup> Alvin Toffler. (1980). *The Third Wave*. The U.S: Bantam Books.

<sup>10</sup> Alvin Toffler. (1991). *Power Shift*. The U.S: Bantam Books.

<sup>11</sup> Feng Jie. (2006). On five-layer human-based management and its application in the library management. *Journal of Changchun Normal University(Natural Science)*. 167-168.

## Case Study I. Example of Non-Chinese Companies

### Starbucks.

**Management philosophy of Starbucks.** The management philosophy of Howard D. Schultz was to regard workers as the number one priority. Despite the fact that customer satisfaction is highly essential in one's business, he believed that workers are as much as important. This way of thinking can be shown through his behaviors and comments. He said that his workers are 'partners' instead of 'employees'. Moreover, by making his 'partners' to feel a sense of ownership to Starbucks, he emphasized 'people business' rather than 'coffee business'. As a result, the coffee prices of Starbucks are much higher than the original value of the coffee since the customers buy the coffee with a special experience which is created by the workers themselves. This fact posed a great importance on the workers in the management process of Starbucks.<sup>12</sup>

### Company scheme.

**Medical insurance benefits.** Starbucks offers medical insurance benefits to all of the workers, including both permanent workers and temporary workers. These medical insurance benefits include prevention health cure, emergency counseling, psychological counseling, medicines, dental service and so on. This shows the attitude of Starbucks toward their workers, which try to resolve the fundamental problems of employees.<sup>13</sup>

**Communication between employers and employees.** Starbucks allows its workers to participate in the management process of the company. This type of atmosphere helps the employees to influence the schemes and policies of the company. In fact, even the part-time workers can receive a financial compensation for suggesting ideas, which stimulates self-management of the workers.<sup>14</sup>

### Mirai Industry.

**Management philosophy of Mirai Industry.** Mirai Industry is known for its unbelievable schemes for the employees. Yamada, who was the CEO of Mirai Industry, mentioned that 'The happiness of workers develops the company'.<sup>15</sup> According to his belief, unlike other companies utilizing result-central management, he made numerous company policies and schemes for his workers to obtain motivation and achieve satisfaction. To illustrate, he listened to almost all of the opinions and personal suggestions of his workers. And he reflected these ideas on the products of Mirai Industry. This uncommon practice of Yamada was resulted into improvements in quality and quantity of the manufactured goods. Thanks to this type of management, Mirai industry became one of the most successful Japanese smaller enterprises.<sup>16</sup>

### Company scheme.

**An overseas trip every 5 years.** Traveling overseas is one of the favorite leisure activities practiced by modern people. The reason for this is because not only does an overseas trip allow travelers to expand one's

<sup>12</sup> Schultz, Howard, Yang, Dori Jones, Conger, Eric (NRT).(1997, September 1). *Pour Your Heart Into It*. the United States: Highbridge Audio

<sup>13</sup> Go Eun Gyeong.(2008, June 13). *Starbucks VS The Territory of a Dandelion*. Korea: 21<sup>st</sup> Century Books

<sup>14</sup> Schultz, Howard.(2003, December 1). *POUR HEART INTO IT-How Starbucks Built a Company One Cup at a Time*. the United States: HYPERION

<sup>15</sup> Seon Wu Jeong(선우정).(2008, January 29). *Meet a 21<sup>st</sup> century Expert in Management(21세기 경영대가를 만나다)*. Korea: Kim-Young-Sa(김영사).

<sup>16</sup> Yamada Akio.(2011, November 1). *The Story of Mirai Industry*. Japan: ぱる出版.

perspective through having new experiences, but it also helps them to effectively release their pressure accumulated from their tough daily schedules. By offering a chance for the workers to travel overseas every 5 years, the workers of Mirai industry can engage in their given duties with joyful mind and refreshed body after they come back from overseas traveling.

*Monetary reward for ideas of the workers.* Mirai Industry offers a monetary reward to each suggestions and ideas from the workers. Due to this company policy, the workers of Mirai Industry don't hesitate in submitting their plans and ideas to the executive officer. Hence, as a result of the constant participation of the workers, Mirai Industry received more than hundreds of suggestions and ideas related to a wide range of facets, including welfare, technology, management, and so on. This special scheme allowed the workers not to afraid failure in suggesting new plans and ideas to employers. Hence, this unique atmosphere made Mirai Industry become the company with more than 2300 industrial property rights.

*Permanent position for all workers plus no redundancy.* Permanent position of a certain job is highly crucial in today's society. The reason for this is because temporary position of a certain job is a great risk in today's competitive society. In the case of Mirai industry, the company not only offered permanent position for all the workers but also announced that there is no redundancy until the age of 70. Even if this company policy could lead to the problem like budget deficit due to management failure, including complacency and the decrease in the productivity of workers, Mirai industry has never experienced any deficit since its foundation in 1965. On the other hand, by eliminating the main concern of the workers, the workers of Mirai Industry could fully concentrate on their given duties and jobs, which can significantly increase efficiency and productivity.<sup>17</sup>

## **Case Study II. Example of Chinese Companies**

### **Zheng Zhou Cable Company(郑州电缆有限公司).**

*Management philosophy of Zheng Zhou Cable Company.* After Zheng Zhou Cable Company was privatized from a public enterprise, the company had experienced a significant drop in sales and lost a number of key workers. In order to solve these problems, the board members of the company implemented new type of management, which was human-based management. The company started to consider more focuses on individuality and personality of workers. Accordingly, there have been a number of changes made from this type of new-paradigm management. Thanks to its innovations, the company has experienced production quality improvement, increase in employee suggestion, cost reduction, and so on. However, the interesting fact is that human-based management of Zheng Zhou Cable Company is influenced by Chinese cultural tradition and philosophies, such as Taoism and School of Law.<sup>18</sup>

#### **Company scheme.**

*Working environment improvement.* After the privatization of the company, the board members underwent an overall renovation of the working environment. For instance, the unhygienic bathrooms of the factories were upgraded to the quality of the bathrooms which has the quality of a first-class hotel. The company also modified

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<sup>17</sup> Kim Deok Kwon.(2015, May 25). 140 days of break time, 3 years maternal leave, permanent position until 70 years old, the utopia for the workers, the secret of the success of Mirai Industry. *THE ASIAN*. Retrieved from <http://kor.theasian.asia/archives/137042>.

<sup>18</sup> Guak Jeongsu.(2012, October 22). "people-oriented 'new-paradigm management' made sales three times much".*Han-Gyeo-Lae*.Retrieved from [http://www.hani.co.kr/arti/economy/economy\\_general/557000.html](http://www.hani.co.kr/arti/economy/economy_general/557000.html)

the atmosphere of the working place by teaching the supervisors to respect the personality of the workers and form a fine social relationship with them. This policy has allowed Zheng Zhou Cable Company to establish its own unique company culture and increase the willingness of the workers when they are doing their job.

*Lifelong learning system.* Since Zheng Zhou Cable Company produces electronic cables and other electronic components, it is highly essential for the company to ensure the quality of the workers' skill and R&D process. In this respect, Zheng Zhou Cable Company underwent benchmarking of lifelong learning system of some of Korean companies, including Yuhan Kimberly, Ltd and POSCO. In addition, the company extended the employee training hour from at least 4 hours a month to at least 15 hours a month. Therefore, not only the workers could learn about safety manuals, job skills, and even the fields that they are interested in, but the company could guarantee the specialized knowledge and make them be cultured.

### **Hai Di Lao<sup>19</sup>.**

*Management philosophy of Hai Di Lao.* The sole goal of Hai Di Lao in its management philosophy is that 'when the workers are happy, the customers can feel satisfaction to their goods and services.' In order to fulfill this principle, Hai Di Lao implemented many unique company policies for the employees.<sup>20</sup>

#### **Company scheme.**

*Offering 100% of educational expenses.* As society has been developed in a dramatic speed, education has become one of the crucial factors for success. However, in order to receive a proper education, it is burdensome for the majority of middle and low class members of society to pay for educational fees due to its tight budget. Especially in China, the gap between the rich and poor has been a problematic social phenomenon. Accordingly, for some young people, they couldn't even get the chance to study about the subjects that they are interested in. With the intention of relieving the financial burden of the workers, Hai Di Lao offered 100% of educational expenses for the children of the workers. This policy allowed the workers to ease their concern for paying educational expenses as well as fully concentrate on their job.

*Establishment of Hai Di Lao University for the workers who are from rural areas.* The majority of workers in Hai Di Lao were mainly composed of the workers from rural areas. Consequently, they lacked the fundamental education related to manners, civic consciousness and so on. Furthermore, they could only engage in physical labor. In this respect, it was difficult for the company to offer high quality services to customers due to the low educational standard among rural workers. With the purpose of upgrading the educational standard of the workers, Hai Di Lao established 'Hai Di Lao University' available for the workers to receive advanced education.

*System of 'report after taking action'.* One of the differentiation of Hai Di Lao from other companies was that the system of 'report after taking action'. This policy allowed the restaurant employees to offer services to customers according their own decision. There have been many attempts made by the workers themselves. For instance, the chefs perform 'Noodle Show' in front of the customers; the employees offer customer satisfaction services, including offering nail-care service and shoeblack service; the workers can even discount the price if

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<sup>19</sup> Si Chuan Hai Di Lao Restaurant Co., Ltd.(四川海底捞餐饮股份有限公司), Chinese Shabu-Shabu restaurant.

<sup>20</sup> Cho Mina. (2012, February 14).Happiness for customers...'Fun Management' of Hai Di Lao benchmarked by KFC. *Han-Guk-Gyung-Jae*. Retrieved from <http://www.hankyung.com/news/app/newsview.php?aid=2012021449531>

they want to. Hence, not only does it encourage the customers to communicate with the workers, but it also stimulates the employees to strengthen self-management of the company.<sup>21</sup>

### **Comparative Analysis**

Their company schemes are closely related to the management philosophy of the companies and their cultural backgrounds. Nonetheless, even if these four companies have practiced human-based management or people-oriented management, there is a noticeable distinction between two kinds of companies. Chinese human-based management heavily focuses on employee education and training system. This phenomenon can be interpreted as the influence of Confucianism. The principle of ‘Cultivate your morals’(修身:Xiu Shen) requires a group to ensure a solid educational basis of the members in order to accomplish the stability of the group. As a matter of fact, Zheng Zhou Cable Company established lifelong learning system and increased the time for employee training in order to help the workers obtain advanced skills and continuously engage in a high-quality R&D process. In the case of Hai Di Lao, it offered various ways of support for education of the workers and their families, including offering dormitory, university education, and educational expenses. This allowed the workers from rural areas to concentrate on given duties and heighten the level of one’s culture. The application of human-based management in both companies made them able to stabilize the company itself and increase the sales. On the contrary, non-Chinese companies, which implemented people-oriented management, more concentrated on welfare rather than education. The reason for this was because, since a lot of western countries or other countries influenced from western countries already successfully established a good educational infrastructure and relatively high civic consciousness of the public, hence, there was no immediate need for the companies to educate their employees about proper manners and basic knowledge and skills for the given jobs. On the other hand, the companies more focused on fulfilling the requirements and opinions of the workers, such as working hour reduction, financial compensation, insurance policy and so on. Because of people-oriented management, the workers could be more self-directed and actively participate to their work, which increased both efficiency and productivity. As a result, one of the great distinctions between these two sorts of management is that of education.

### **Chinese Human-based Management and the Advent of 90 Hou Generation**

**Definition of 90 Hou Generation.** The phrase, ‘90 Hou’ stands for the Chinese word ‘九零后’. ‘九零’ means ‘1990s’. ‘后’ means ‘after’. Therefore, 90 Hou can be interpreted in English that people who born in 1990s. However, in China, It only includes Chinese people who born in 1990s.

**Characteristics of 90 Hou Generation.** In contrast to ‘80 Hou’ generation, 90 Hou Generation shows numerous different characteristic. Firstly, 90 hou Generation is more adapted to the information-oriented society and digital devices. After 80 Hou Generation introduced these devices and infrastructure into china, 90 Hou Generation is now utilizing these devices and infrastructure more comfortably and skillfully. Secondly, due to the birth control of Chinese government, the majority of 90 Hou have been raised with an unconditional support of their parents. Therefore, they possess more independent and individualized personality than what the previous generation did. Thirdly, a number of people from 90 Hou Generation are familiar in expressing and sharing their ideas and interest with other people through many

<sup>21</sup> Huang Tie Ying.(2011, April 15). *Hai Di Lao, You Can’t Learn*. China: Zhong Xin Publisher.



Chinese social network services. Fourthly, as the world has become intensively globalized, 90 Hou Generation has stronger ability to bring foreign cultures and ideas into their society than older Chinese generations. Lastly, Thanks to the improvement in educational infrastructure in China, the educational standard of 90 Hou Generation is relatively higher than the past generation. Hence, this more well-educated generation is expected to be the key growth power for different industries in China.<sup>22</sup>

**Prospect for human-based management and 90 Hou Generation.** As more and more 90 Hou Generation started to enter real society, there have been numerous factors that received attention from the public. One of the most noteworthy transformations is that of education. Since the previous generation of China introduced and established educational, 90 Hou Generation received a proper amount of education benefits for accomplishing higher goals and being the growth power of the nation. As they become more open-minded to foreign culture and influences, this type of attitude can be the catalyst for them to make use of human-based management into their businesses, which is receiving attention around the world. This unusual characteristic of 90 Hou Generation can be seen in today's Chinese society. To elaborate, Xiao Mi<sup>23</sup> is known for its constant communication and interaction with their 90 Hou customers. They hold meeting and exchanging suggestions and feedbacks periodically. When the Xiao Mi customers suggest their opinion and ideas to Xiao Mi, Xiao Mi collects these feedbacks and actually reflect these suggestions to their software update, which holds every Friday. Thanks to its horizontal relationship among the customers, employees, and employers, it created a wholehearted fandom, which mainly composed of 90 Hou Generation. As it mentioned above, 90 Hou Generation is already involving themselves in society and communicating with such enterprises. As a result, the possibility of 90 Hou Generation participating in human-based management is relatively high.<sup>24</sup>

### III. Conclusion

Through this research, the presence of human-based management and the researches related to human-based management are verified. However, there is a huge difference between Chinese human-based management and western people-oriented management, even if two types of management style regard people as the number one priority. In contrast to the countries influenced by westerns, Chinese companies utilize the principle of Chinese ideologies, especially cultivating one's morals to create added value and stabilize the organization. However, it is rather demanding for Chinese companies to practice human-based management in their management process due to the fact that the major industries in Chinese market were already nationalized.<sup>25</sup> On the other hand, since there were some of instances, including Zheng Zhou Cable Company,

<sup>22</sup> Zhou Zhong Yu, Xu Yan. (2013). Survey of psychological characteristics of 90 Hou university students. *Journal of Chongqing University of Science and Technology (social sciences edition)*.

<sup>23</sup>Xiaomi inc. is a Chinese electronics company headquartered in Beijing, China. The world's 3<sup>rd</sup> largest smart phone distributor, Xiaomi designs, develops, and sells smart phones, mobile apps, and consumer electronics.

<sup>24</sup> Zhang Bao Jun. (2010). Analysis of psychological characteristics and solution of 90 Hou University Students. *LEADING JOURNAL OF IDEOLOGICAL & THEORETICAL EDUCATION*.

<sup>25</sup> Liu Jian Li(刘建利).(2006). The research about the human-based management of Chinese state-owned enterprises. *Zhong Yang Min Zu Univeristy*. doi: 10.7666/d.y864073.

which successfully implemented human-based management when they were privatized, not only there will be more Chinese nationalized enterprises later transformed into privatized corporations, but there will be also a number of innovative attempts to modify the inefficient management model into new management models. Furthermore, thanks to new and more effective entrepreneurial supporting policy decided by the Chinese government of Xi Jin Ping in National People's Congress(全国人民代表大会), 90 Hou generation will be able to establish a business with little capital resources. As a result, the view of the possibility of the success of Chinese human-based management is extraordinarily positive. Furthermore, 90 Hou Generation will be the main key factor to accelerate the development of human-based management and upgrade the consciousness of humanistic thought in the Chinese society.

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# Relationship between the consumer attitude toward the Corporate Public Advertisement and the Corporate Image

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## Abstract

After the 1997 Asian Financial Crisis, short-termism was heavily criticized, shifting the social value from the profit to people. The majority of profit-maximizing firms in South Korea acknowledge the external costs arising from the production of goods or services. Societies now have the perception that the “firms should benefit stakeholders such as consumer, investors, labor and local community, and be a necessary organization for the society” (Dong Hyun Yang, 2008).

Firms attempt to engage with problems such as environmental sustainability, and public welfare systems in order to reform their image, transforming the negative consumer attitude of them. (Hua Zhang, 2010) In that sense CPA, also known as Corporate Public Advertisements, can be the best tactic to shape consumer attitude. Indeed, the humanizing effect of a well-produced advertisement, projecting a firm’s community engagement and positive ethos, can prove an effective aide to transforming the perception of a corporation by the consumer into something more ethical and upstanding, thereby perhaps ensuring consumer loyalty.

Now the image of the firm is one of the key factors that determine consumer behavior. Simple product advertisements tend to benefit firms in the short term, where the purpose is to highlight the product in order to sell more. Public advertisements are arguably more about long-term gain; by advertising a firm’s social responsibility they may refine the corporate image, and can also gain credibility. (Han Su Kim, 2013)

The main purpose behind the CPA is to change consumer behavior in the long run. Fishbein’s Multi-Attribute Model (Fishbein, 1963) may represent the process of transformation of consumer attitude and explain the relationship between consumer attitude and the corporate image. In order to use the model, the primary data will be collected via survey toward different demographics that will answer how they think about the specific firm after watching the CPA provided by that firm. The survey’s reliability will also be checked by using Cronbach’s  $\alpha$ . The survey will be used to analyze the association between the consumer attitude and corporate image, allowing to verify the effectiveness of public advertisement.

The statistical analysis showed 3 different conclusions. Firstly, most of the consumers who were exposed to the CPA recognized and remembered the content of the CPA. Secondly, there was a positive association between the corporate image and the CPA. And lastly, consumers with positive consumer attitude or has a salient belief on the people centered management showed a better consumer cognition on the corporate image.

It is crucial for a firm to be cognizant of the relationship between the advertisement and consumer behavior as they may provide a more effective and persuasive advertisement. Acknowledging such relationship, the aim of this paper is to address the concomitant relationship between a consumer attitude and its effect on the

corporate image. This paper aims to act as a stepping-stone for wider investigations into successful consumer-marketing tactics dealing with the CPA.

## I. Introduction

One of the main rationale behind the firm's advertisement is the belief that consumers who were exposed to the advertisement may form a positive behavior toward the firm and its product, increasing the sales of the firm. It is widely acknowledged and researched that the consumer exposure on the advertisement can lead to a formation or transformation of the consumer attitude.

Consumer attitude means a particular reaction of the consumer toward the advertisement, which can be either positive or negative. Consumer attitude toward a certain issues can affect how consumers recognize the advertisement. For example, consumers can have a positive attitude and belief toward softness of Hyundai's car. If Hyundai Motor shows an advertisement that emphasizes the softness of the car toward that consumer, the consumers will recognize such advertisement better. With the case of CPA, which refers to Corporate Public Advertisement, the original consumer attitude toward social issues will immensely affect the behaviour of the consumers who were exposed to such Public Advertisement.

However Colley (1979) recognized that more effective the advertisement is, it may lead to a transformation or even a formation of positive consumer attitude and hence leading to a more positive corporate image. Hence, firms should aim for an advertisement which can form a positive consumer attitude and need to understand how consumer attitude can be formed after the exposure of advertisements.

Corporate image can be determined by the attributes of the brand and it can also be determined by the consumer attitude toward the advertisement. The importance of the consumer attitude should be emphasized as there there exists a strong relationship between the corporate image and the consumer attitude. It is crucial to understand the consumer attitude in more depth, and it is even more crucial to understand the consumer attitude toward the people centered management: as the corporate image of firms with people centered management can be linked to various social issues, where the civilian's interest on the social surplus is increasing year by year.

## II. Literature Reviews

### 2.1 People Centered Management and Corporate Public Advertisement

#### 2.1.1 Definition of Corporate Public Advertisement

CPA is a form of communication toward societies, dealing about public and social issue, rather in the perspective of maximizing the social surplus and utility than the perspective of profit maximization. (Darian, 1993)

Simply CPA is one type of communication to show the firm's engagement with social responsibility toward the public. Usually, it is an advertisement that delivers the message toward the public that the firm share their profit with the society in order to maximize the social surplus by actively engaging with certain social issues. While CPA may purely break the perception that firms prioritize profit maximization, the main rationale behind the CPA is to form the positive corporate image: differentiating themselves from other firms hence it is one type of corporate advertisement. (Kyung Hee Kim, 2002)

While firms stand as an individual system in the society, there should exist a bilateral interaction between firms and the society as it is also one of the social substructure that needs to engage with social responsibility. (Jae-Young Choi, 2001) Large TNCs in Korea (also known as Chaebol, a family owned companies) recognize the importance of them showing the engagement with social issues -- recognize that they need to improve their corporate image -- and use CPA to transform consumer attitude hence corporate image, rather than them actually engaging with the social issues.

### **2.1.2 Definition and role of the Corporate Image**

The importance of the corporate image is widely recognized between firms as better the corporate image, consumers showed more positive consumption activities. (Young-suk Park, 1987) Despite the fact that the corporate image is important, there are many different definitions for the corporate image. In the study conducted by Jun-il Lee(2007), the corporate image was defined as total combinations of believes, information, and experiences of the stakeholders toward a certain firm. Indeed, a positive corporate image can be the external appearance of the firm which can increase the number of potential buyers by affecting the consumer behavior.

Previous researches believed that the corporate image is a unique identity of a firm: a general appearance of one firm from many perspectives. The corporate image can be either positive and negative, and the determining factor is rather consumers than a firm. Consumers believe that the most determining factor when they assess firm is a corporate image, yet in the research paper conducted by Hua-Zhang (2009), the most determining factor of the corporate image is the product attribution. However, such technological advances and innovation allowed an almost indistinguishable quality for many products. Hence it is appropriate to mention that the corporate image, the second most determining factor of the corporate image, is quite crucial in modern days.

### **2.1.3 Determinants of Corporate Image**

Recognizing the importance of the corporate image, there was a need for specific details of the determinants, in order to improve the corporate image. As previously mentioned, the definition of corporate image may differ with different scholars, hence there is no fixed determinants. However, there are common determinants in various researches including ones that were conducted by Won-Su Kim(1993) and Schwartz(1995). The concept of the corporate image, originated from the gestalt psychology, is formed by both consumers and potential consumers through advertisements and product appraisal which are collected through various types of marketing communication. As this research is aiming to discuss how CPA is recognized and forms a certain consumer attitude, this research would like to focus on the advertisement out of various determinants.

### **2.1.4 Relationship between the Corporate Image and Corporate Public Advertisement**

The CPA is one of the most commonly practiced advertisement from the firm to actively establish the corporate image, as CPA is one of the most effective tool to show the public how they are engaging with the social responsibility. Hence, if the firm is intending to transform or form a certain consumer attitude toward the corporate image, the CPA may be the best form of advertisement to deliver such message. Simple product

advertisements tend to benefit firms in the short term, where the purpose is to highlight the product in order to sell more. Yet public advertisements are arguably more about long-term gain; by advertising a firm's social responsibility they may refine the corporate image, and can also gain credibility. (Han Su Kim, 2013) The CPA can be a crucial communication tool where firms may be able to deliver the concept of public interest and form a better corporate image. (Jae-Young Choi, 2001)

Lynn (1973) , discussed and analyzed about the source effect, message effect and consumer effect of the public advertisement made by the Advertisement Council of America. The conclusion was that the consumer attitude was determined by the educational level and age, where younger generations remembered the public advertisement better and had more positive attitude toward the corporate image. On the other hand Andreasen (1993) studied the message connoted in the CPA, where he hypothesized that the more effective advertisement required to deliver a specific message about the social cost and benefit, which leads to a better learning from consumers, hence better message.

Although there is an increasing number of CPA by firms as a communication tool with the public, most firms did not conducted studies that deals with advertisement objects and subjects. Without any proper information or rationale, CPA tends to deal with the most common social issues. This research paper acknowledges that there are no sufficient numbers of research discussing about the effects of the CPA, and even researches that discussed about the CPA have a limitation when it tries to explain the specific effect of the CPA. Hence, this paper would like to analyze the CPA more specifically: how consumer cognition of the CPA forms a certain consumer attitude, and how this consumer attitude forms a certain corporate image.

## **2.2 Consumer attitude**

### **2.2.1 Consumer cognition and behavior**

Consumer attitude is formed by the external information, experience or reasoning. Yet the attitude is formed based on the salient beliefs out of many different formed by these external factors. (Jin-A Hong, 2010) Multi-Attribute Model was widely recognized as a model providing an essential information for the marketing decision of the firm. For example, if the general view toward the certain brand or corporation was asked, it is unable to recognize why consumers perceive that brand or corporation. However if the Multi-Attribute Model is used, not only recognizing the salient belief that affected the consumer attitude, a firm may be able to come up with tactics that may transform the consumer attitude. As the aim of this research is to discuss the relationship between the consumer attitude and the corporate image, this paper would like to discuss the formation of the consumer attitude with the Multi-Attribute Model. There were many Multi-Attribute Model suggested to explain the formation of the consumer attitude, however this paper would like to use the Fishbein's Multi-Attribute Model, which is most commonly practiced model by firms.

### **2.2.2 Fishbein's Multi-Attribute Model**

Fishbein (1963) suggested an attribute model which shows that the consumer attitude is determined by salient beliefs and the attributes evaluation. Beliefs in his research means a subjective opinion toward the attribution of a product or a corporation.

The model suggests that the attitude may be formed by the exposure of advertisement, and more frequent the exposure of CPA meant a confidence in their attitude. The model also shows a high association between the consumer attitude in relation to people centered management and the CPA. Although the consumer behavior may not change according to the model, the effect of the CPA toward the consumer attitude and the formation of the corporate image is significant.

### III. Method

#### 3.1 Research Model

Based on the previous researches, the research model can be suggested as Figure 1 below.

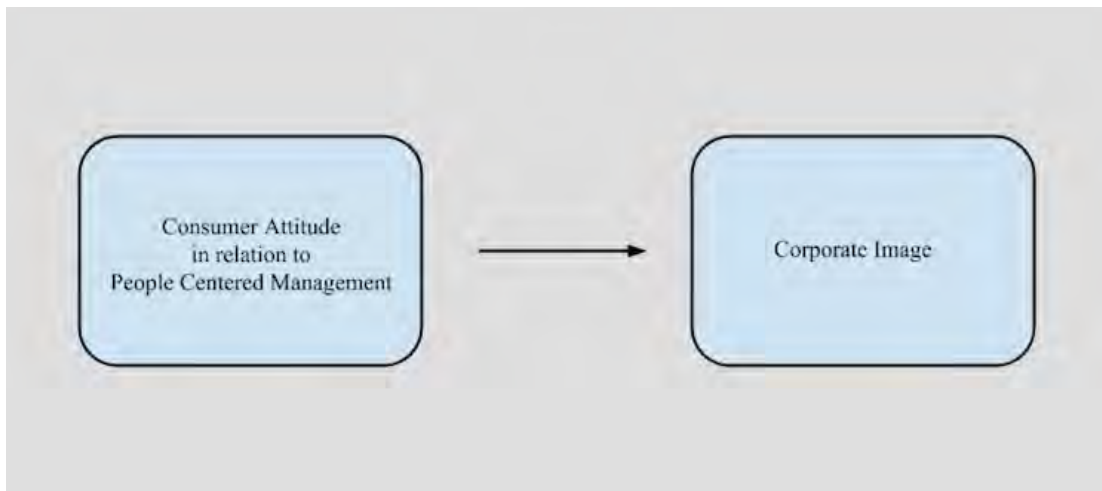


Figure 1. Model showing an association between the Consumer Attitude and the Corporate Image

#### 3.2 Hypothesis

H1. More positive consumer attitude in relation of people centered management, better the corporate image.

Figure 1 can represent a part of the Fishbein's Multi-Attribute Model. As this paper acknowledges problems mentioned previously in 2.1.4, there is a need to discuss the association between the consumer attitude and the corporate image. Also, as we recognize the importance of corporate image, showing an association between the consumer attitude and the corporate image will be meaningful.

As this research is specifically focusing in the CPA and its effect, consumer attitude toward the social issues will be regarded. Highlighting the fact again, the reason why we narrowed the advertisement to CPA and consumer attitude to the attitude in relation to the people centered management is because the CPA produced by Korean TNCs are dealing with issues regarding the people centered management, and the people centered management can be linked to various social issues such as labour rights, working conditions, and social surplus.

#### 3.3 Research Tool

##### 3.3.1 Consumer attitude in relation of people centered management.

Survey used in the research conducted by Hwa-Chang (2010), which contains 6 questions with 1-5 likert scale each will be used. Higher the scale point means more positive consumer attitude. Questions include: "I



like the advertisement”, “The advertisement is trustworthy”, “The advertisement was appealing”, “The advertisement was sincere”, “The advertisement was memorable”, and “The information delivered by the advertisement was helpful”.

### 3.3.2 Corporate Image

Survey used in the research paper conducted by Il-Gwon Sohn (2003), which contains 6 questions with 1-5 likert scale will be used. Higher the scale point means better the corporate image. Questions include: “The firm shows a responsibility”, “The firm has cordiality”, “The firm seems to be ethical and wholesome firm”, “The firm is trustworthy”, “The firm is actively engaging with the social responsibility”, and “The firm is trying to maximize the social surplus”.

### 3.3.3 Personal background and CPA experience

The personal background was categorized by 4 different categories (Age, Gender, Educational level and Job), and in order to explain the cognitive learning of the CPA, 1 question about the CPA experience (numbers of CPA exposure) was included with 5 different sub-questions which is: “I vaguely remember (recognize) this advertisement”, “I remember (recognize) this advertisement to a certain extent”, “ I fairly remember (recognize) this advertisement”, “ I considerably remember (recognize) this advertisement”, and “I clearly remember (recognize) this advertisement”.

### 3.4 Data collection and analysis procedure

Based on the research tool, the survey was prepared and was distributed toward people over 16 following the random sampling procedure. The data collected was then organized in the Excel, and then was empirically analyzed with SPSS 12.0. The statistical analysis procedure was as follow;

1. Frequency Analysis of demographical characteristics toward the research targets
2. To check the reliability of research tool (survey), Cronbach’s alpha value was used
3. To prove the hypothesis, correlation test and regression analysis were used.

## IV. Data Analysis

### 4.1 Demographical characteristics of targets: Frequency Analysis

The survey was done mainly by students who were over 15, living in Jeju Global Education City. There was a total of 200 respondents, yet respondents who missed out many questions were excluded. 175 data collected was analyzed to empirically prove the hypothesis. The result of the frequency analysis is as Table 1.

Demographical Characteristics		Frequency (%)
Gender	Male	88 (50.6%)
	Female	87 (49.4%)

Age	15	32 (18.6%)
	16	66 (37.4%)
	17	56 (32.3%)
	18	17 (9.4%)
	19	4 (2.3%)
CPA experience (Number of CPA exposure)	I vaguely remember (recognize) this advertisement	58 (33.4%)
	I remember (recognize) this advertisement to a certain extent	34 (19.4%)
	I fairly remember (recognize) this advertisement	30 (16.9%)
	I considerably remember (recognize) this advertisement	14 (8.3%)
	I clearly remember (recognize) this advertisement	39 (22%)
Total		175 (100%)

*Table 1. Frequency Analysis of Demographical Characteristics*

Out of 175 respondents, there was 88 males (50.6%) and 87 females (49.4%). Age group with the highest respondent number was 16 years old (37.4%), and then were 17 years old (32.3%), 15 years old (18.6%), 18 years old (9.4%), and 19 years old(2.3%), in that order. With the question about the CPA experience (number of CPA exposure) the number of respondents who answered “I vaguely remember (recognize) this advertisement” was 58(33.4%), “I remember (recognize) this advertisement to a certain extent” was 39 (22%), “ I fairly remember (recognize) this advertisement” 34(19.4%), “ I considerably remember (recognize) this advertisement” 30(16.9%), and “I clearly remember (recognize) this advertisement” was 14(8.3%).

#### **4.2 Reliability of the Research Tool: Cronbach’s Alpha**

In order to assess the validity and reliability of the lists in the survey, reliability between the multi-item scale was analyzed by using Cronbach’s Alpha value. There are reexamination method, multiple form method, split-half method, Internal consistency method(Cronbach’s Alpha) to check the measurement reliability. However this research used Cronbach’s alpha as the multiple questions and scales were dealing with one concept, allowing to find out the scale that decreases the level of reliability, which exclusion of that scale can increase the level of reliability. Usually the critical value of Cronbach’s alpha is 0.6. If the value is above 0.6,

we acknowledge that the survey is quite reliable. Under such criteria, the Cronbach’s Alpha value was analyzed as the Table 2 below.

Measuring Tool	Cronbach’s Alpha
Consumer Attitude in relation of people centered management	0.827
Corporate Image	0.819

Table 2. Cronbach’s Alpha value for the consumer attitude and the corporate image

The analysis showed that the alpha value for 6 questions regarding the consumer attitude was 0.827 and the alpha value for 6 questions regarding the corporate image was 0.819. Both of the questions were above the critical value of 0.6, which we may conclude that the survey was reliable.

#### 4.3 Correlation Test: Pearson’s Correlation Coefficient R

In order to look at the association (correlation) between the consumer attitude and the corporate image, pearson’s correlation coefficient test was used. The analysis came out as Table 3 below.

		1	2	3	4	5	6	7	8	9	10	11	12
Consumer Attitude in relation to people centered management	"I like the advertisement"	1											
	"The advertisement is trustworthy"	0.418**	1										
	"The advertisement was appealing"	0.190**	0.140**	1									
	"The advertisement was sincere"	0.558**	0.335**	0.222**	1								
	"The advertisement was memorable"	0.497**	0.339**	0.233**	0.682**	1							
	"The information delivered by the advertisement was helpful"	0.205**	0.079	0.099	0.138**	0.211**	1						
Corporate Image	"The firm shows a responsibility"	0.170**	0.239**	0.008	0.202**	0.111*	0.008	1					
	"The firm has cordiality"	0.413**	0.276**	0.158**	0.477**	0.425**	0.211**	0.233**	1				
	"The firm seems to be ethical and wholesome firm"	0.487**	0.522**	0.179**	0.520**	0.406**	0.038	0.245**	0.392**	1			
	"The firm is trustworthy"	0.339**	0.474**	0.140**	0.294**	0.362**	0.037	0.425**	0.240**	0.441**	1		
	"The firm is actively engaging with the social responsibility"	0.260**	0.404**	0.128*	0.255**	0.273**	0.013	0.391**	0.199**	0.441**	0.707**	1	
	"The firm is trying to maximize the social surplus"	0.296**	0.518**	0.148**	0.275**	0.317**	0.006	0.266**	0.198**	0.480**	0.699**	0.625**	1
Mean		3.946	3.533	3.522	4.057	3.983	3.564	31.672	3.942	3.120	3.547	3.604	4.010
Standard Deviation		0.818	0.824	1.029	0.849	0.856	0.901	0.795	0.889	0.840	0.689	0.775	1.017

\*p < 0.5, \*\*p < 0.1 (The significant probability value of the numbers in the table)

Table 3. Correlation Coefficient test for the Consumer Attitude and the Consumer Image #

#

The question included in the Consumer Attitude in relation to the people centered management, “I like the advertisement” showed a positive (+) correlation with the questions included in the Corporate Image section by showing a correlation value of: “The firm shows a responsibility” ( $r=0.170^{**}$ ), “The firm has cordiality”( $r=0.413^{**}$ ), “The firm seems to be ethical and wholesome firm” ( $r=0.487^{**}$ ), “The firm is trustworthy” ( $r=0.339^{**}$ ), “The firm is actively engaging with the social responsibility” ( $r=0.260^{**}$ ), and “The firm is trying to maximize the social surplus” ( $r=0.296^{**}$ ). #

With the case of the question “The advertisement is trustworthy”, it also showed a positive (+) correlation between the questions in the Corporate Image section which were: “The firm shows a responsibility” ( $r=0.239^{**}$ ), “The firm has cordiality” ( $r=0.276^{**}$ ), “The firm seems to be ethical and wholesome firm” ( $r=0.522^{**}$ ), “The firm is trustworthy” ( $r=0.474^{**}$ ), “The firm is actively engaging with the social responsibility” ( $r=0.404^{**}$ ), and “The firm is trying to maximize the social surplus” ( $r=518^{**}$ ). #

With the case of the question “The advertisement was appealing”, it again showed a positive (+) correlation with questions in the Corporate Image section which were: “The firm has cordiality” ( $r=0.158^{**}$ ), “The firm seems to be ethical and wholesome firm” ( $r=0.179^{**}$ ), “The firm is trustworthy” ( $r=0.140^{**}$ ), “The firm is actively engaging with the social responsibility” ( $r=0.128^{*}$ ), and “The firm is trying to maximize the social surplus” ( $r=0.148^{**}$ ). #

#

“The advertisement was sincere” showed a positive (+) correlation with the Corporate Image which were: “The firm shows a responsibility” ( $r=0.202^{**}$ ), “The firm has cordiality” ( $r=0.477^{**}$ ), “The firm seems to be ethical and wholesome firm” ( $r=0.520^{**}$ ), “The firm is trustworthy” ( $r=0.294^{**}$ ), “The firm is actively engaging with the social responsibility” ( $r=0.255^{**}$ ), and “The firm is trying to maximize the social surplus” ( $r=0.275^{**}$ ). Positive (+) Correlation.#

“The advertisement was memorable” showed a positive (+) correlation with the Corporate Image which were: “The firm shows a responsibility” ( $r=0.111^{*}$ ), “The firm has cordiality” ( $r=0.425^{**}$ ), “The firm seems to be ethical and wholesome firm” ( $r=0.406^{**}$ ), “The firm is trustworthy” ( $r=0.362^{**}$ ), “The firm is actively engaging with the social responsibility” ( $r=0.273^{**}$ ), and “The firm is trying to maximize the social surplus” ( $r=0.317^{**}$ ). #

And the question “The information delivered by the advertisement was helpful” in the Consumer Attitude section showed a positive (+) correlation with the question “The firm has cordiality” ( $r=0.211^{**}$ ). #

#

#### 4.4 Consumer Behavior and Corporate Image #

In order to prove the hypothesis, the mean of the R and P value was calculated to apply into the simple regression analysis. The result was as Table 4 below. #

#

Independent #	#	se#	#	t#	p#
Variable#	1.724#	0.347#	#	4.964#	0.000#

<b>Consumer Attitude in relation to the people centered management</b>	0.152	0.046	0.186	3.291	0.000***
$R^2 = 0.399, \beta = 0.186, \alpha = 0.000^{***}$					

Table 4. Simple regression analysis on the consumer attitude and the corporate image

Regression analysis, explanation ability was 39.9% by  $R^2$  being 0.399. Deviation was notable as the  $\alpha$  value was 15.040 ( $p < 0.001$ ). Effect of the independent variable consumer attitude toward the dependent variable, which was the corporate image, was statistically meaningful by showing  $\beta = 0.186$  ( $p < 0.001$ ) and a positive (+) correlation. Hence the hypothesis was valid: better the consumer attitude toward the people centered management, better the corporate image.

### V. Conclusion

The social value shifted from the profit to people, despite the fact that we are living in the capitalist society. The importance of the people centered management is recognized by the the labours, consumers and the society, as such management method can engage with multiple social issues. As the consumer attitude and interest in the people centered management is significant, firms can change the corporate image and increase revenue when they can come with management/advertisement strategy that tackles such attitude. With this perspective, studying the previous researches allowed to access relationship of the consumer attitude, behaviour and the corporate image, and the Fishbein's Multi-Attribute Model, which aroused the question whether there is an association between the consumer attitude and the corporate image if the CPA -- modern trend for the advertisement -- was exposed. After such analysis there were 3 conclusions leded. Firstly, most of the consumers who were exposed to the CPA recognized and remembered the content of the CPA. Secondly, there was a positive association between the corporate image and the CPA. And lastly, consumers with positive consumer attitude or has a salient belief on the people centered management showed a better consumer cognition on the corporate image.

With such conclusions, it is able to mention that the firms are able to transform the corporate image after showing their CPA: by making consumers to recognize that they engage the social responsibility under the people centered management. This paper acknowledges a strong need for a firm to use CPA to form or transform one's corporate image. However the formation of the corporate image by the CPA cannot be the ethical solution. The firms should rather consider their business principle, direction under the people centered management, which will also form a positive corporate image by tackling the consumer attitude toward the social issues and people centered management. Pretentious image formed by the CPA cannot be a long lasting image. The corporate image will be positive only if the firms shift their focus on the people: the firm can form a true positive corporate image by the labours and consumers.

### VI. Evaluation

Although the research was conducted based on the reliable survey and 200 respondents, the survey was collected from 15-19 years old who were living in Jeju Global Education City. Hence, the targeted respondents should be expanded to a wider age group and in different regions. Also, the research was discussing about the Corporate Image after the exposure of CPA, which may be a perfunctory variables. Rather than using such variable, more substantive variables such as internal management strategies and system should be analyzed in order to show how actual attempt on changing its focus from profit to people affects the corporate image.

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