

ANALISIS PEMILIHAN MODA TRASPORTASI DENGAN METODE *STATED PREFERENCE*

(Studi Kasus: Bandara Adi Soemarmo Surakarta-Kota Solo)

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ABSTRAK

Adanya perbedaan karakteristik antara ketiga moda transportasi yaitu kereta api, travel dan taxi dengan rute Bandara Adi Soemarmo – Kota Solo memberikan pertanyaan faktor apa yang mempengaruhi seseorang dalam memilih moda untuk melakukan perjalanannya dengan metode *stated preference*. Survey berupa kuisioner dimulai dengan mendapatkan jumlah sampel yang dibutuhkan. Kemudian disebarkan di terminal kedatangan dan stasiun kedatangan kereta api Bandara Adi Soemarmo. Hasil survey dikumpulkan kemudian dilakukan analisis regresi linear berganda setelah itu diproses dengan model regresi *multinomial logit*. Dari hasil analisis regresi linear berganda dengan menggunakan bantuan *software* SPSS didapat persamaan terbaik moda transportasi kereta api, yaitu $Y_{\text{Kereta Api}} = 0,921 - 0,161 (\text{keselamatan}) + 0,432 (\text{kondisi fisik})$, Moda transportasi travel, yaitu $Y_{\text{Travel}} = 0,900 (\text{biaya}) - 0,645 (\text{keselamatan}) + 0,600 (\text{kondisi fisik}) + 0,500 (\text{kendalan})$, Moda transportasi taxi, yaitu $Y_{\text{Taxi}} = 2,526 - 0,024 (\text{kecepatan}) - 0,026 (\text{biaya}) - 0,390 (\text{kenyamanan}) + 0,193 (\text{keamanan})$. Dari hasil perhitungan yang dilakukan, maka diperoleh probabilitas terpilihnya moda transportasi yang akan digunakan berdasarkan utilitas masing-masing moda yaitu $P(\text{kereta api}) = 24\%$, $P(\text{travel}) = 25\%$ dan $P(\text{taxi}) = 51\%$. Dari hasil yang diperoleh taxi memiliki nilai utilitas yang lebih tinggi sehingga pelaku perjalanan lebih banyak memilih moda transportasi ini.

Kata kunci : *stated preference*, regresi *multinomial logit*, kereta api, taxi, travel

TRANSPORTATION MODE SELECTION ANALYSIS USING STATED PREFERENCE METHOD (Case Study: Adi Soemarmo Airport Surakarta-Solo City)

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ABSTRACT

The existence of characteristic differences between the three modes of transportation, namely train, travel and taxi with the route Adi Soemarmo Airport - Solo City raises the question of what factors influence a person in choosing a mode to travel with the stated preference method. The survey in the form of a questionnaire begins with obtaining the required number of samples. Then it was distributed at the arrival terminal and train arrival station at Adi Soemarmo Airport. The survey results were collected and then performed multiple linear regression analysis after which it was processed using a multinomial logit regression model. From the results of multiple linear regression analysis using the help of SPSS software, the best equation for the mode of rail transportation is obtained, namely $Y_{\text{Travel}} = 0.921 - 0.161 (\text{safety}) + 0.432 (\text{physical condition})$, the mode of travel transportation, namely $Y_{\text{Travel}} = 0.900 (\text{cost}) - 0.645 (\text{safety}) + 0.600 (\text{physical condition}) + 0.500 (\text{constraint})$, Mode of taxi transportation, namely $Y_{\text{Taxi}} = 2.526 - 0.024 (\text{speed}) - 0.026 (\text{cost}) - 0.390 (\text{comfort}) + 0.193 (\text{safety})$. From the calculation results, the probability of selecting the mode of transportation to be used is based on the utility of each mode, namely $P(\text{train}) = 24\%$, $P(\text{travel}) = 25\%$ and $P(\text{taxi}) = 51\%$. From the results obtained, taxis have a higher utility value so that more travelers choose this mode of transportation.

Keywords: stated preference, multinomial logit regression, train, taxi, travel