

ANALISIS DAMPAK *COVID-19* TERHADAP KARAKTERISTIK PERILAKU PERJALANAN DALAM PEMILIHAN MODA TRANSPORTASI (Studi Kasus: Kota Yogyakarta)

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ABSTRAK

Pemilihan moda/angkutan merupakan model terpenting dalam perencanaan transportasi. Hal ini karena peran kunci dari transportasi public dalam berbagai kebijakan transportasi. Masalah pemilihan moda dapat dikatakan sebagai tahap terpenting dalam perencanaan dan kebijakan transportasi. Akibat penyebaran wabah *Corona Virus Disease 2019 (COVID-19)* seluruh negara di dunia mengalami kesulitan, termasuk Indonesia. Salah satu dampaknya berakibat pada penurunan pergerakan moda transportasi karena dibatasi adanya kebijakan pemerintah. Studi ini mengkaji perubahan yang terjadi pada karakteristik pelaku perjalanan, karakteristik perilaku perjalanan, dan karakteristik sistem moda transportasi selama dan sesudah pandemi COVID-19, serta membuat model pemilihan moda transportasi. Adapun metode analisis yang digunakan adalah analisis deskriptif kuantitatif. Analisis deskriptif digunakan untuk menjelaskan karakteristik pemilihan moda transportasi. Sedangkan analisis kuantitatif digunakan untuk mengetahui factor-factor yang mempengaruhi pemilihan moda selama dan sesudah COVID-19 dengan analisis regresi linier berganda menggunakan *software* SPSS 23.0. Kemudian hasil persamaan regresi linier akan dimasukkan kedalam model logit biner untuk mengetahui probabilitas pemilihan moda transportasi selama dan sesudah COVID-19. Hasil penelitian menunjukkan dua persamaan fungsi utilitas didapat dari analisis regresi linear yaitu fungsi utilitas selama COVID-19, $Y = 0,164 - 0,040 X_1 - 0,102 X_2 + 0,044 X_3 - 0,042 X_4 + 0,381 X_5 + 0,021 X_6 - 0,054 X_7 + 0,028 X_8 + 0,069 X_9 + 0,083 X_{10} + 0,019 X_{11} - 0,003 X_{12} + 0,003 X_{13} - 0,069 X_{14} + 0,063 X_{15}$ dan fungsi utilitas setelah COVID-19, $Y = 0,549 - 0,058 X_1 - 0,134 X_2 + 0,043 X_3 - 0,044 X_4 + 0,359 X_5 + 0,008 X_6 - 0,039 X_7 + 0,036 X_8 + 0,080 X_9 + 0,005 X_{10} + 0,083 X_{11} - 0,126 X_{12} - 0,027 X_{13} - 0,007 X_{14} - 0,039 X_{15}$. Dari hasil tersebut diketahui ada Sembilan variabel yang berpengaruh secara parsial terhadap pemilihan moda selama COVID-19 yaitu jenis kelamin, pekerjaan, pendapatan, kepemilikan kendaraan, maksud perjalanan waktu tempuh, pertimbangan keamanan dan keselamatan, pertimbangan akses, dan infection concern dan ada delapan variabel yang berpengaruh secara parsial terhadap pemilihan moda sesudah COVID-19 yaitu usia, jenis kelamin, pekerjaan, pendapatan, kepemilikan kendaraan, maksud perjalanan waktu tempuh, pertimbangan kebersihan. Maka didapat hasil bahwa probabilitas pemilihan moda selama COVID-19 yaitu 59% memilih angkutan pribadi dan 41% memilih angkutan umum, sedangkan setelah COVID-19 yaitu 55% memilih angkutan pribadi dan 45% memilih angkutan umum.

Kata Kunci: Pemilihan Moda, Faktor-faktor yang Mempengaruhi Pemilihan Moda, Metode Logit Biner, Covid-19.

ANALYSIS OF THE IMPACT OF COVID-19 ON TRAVEL BEHAVIOR CHARACTERISTICS ON TRANSPORTATION MODE CHOICE

(Case Study: Yogyakarta City)

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ABSTRACT

Mode/transport selection is the most important model in transportation planning. This is because of the key role of public transportation in various transportation policies. The problem of mode choice can be said to be the most important stage in transportation planning and policy. As a result of the spread of the Corona Virus Disease 2019 (COVID-19) outbreak, all countries in the world are experiencing difficulties, including Indonesia. One of the impacts is a decrease in the movement of transportation modes due to restrictions on government policies. This study examines changes that occur in the characteristics of travelers, characteristics of travel behavior, and characteristics of the transportation mode system during and after the COVID-19 pandemic, and creates a model of transportation mode choice. The analytical method used is quantitative descriptive analysis. Descriptive analysis is used to explain the characteristics of transportation mode selection. Meanwhile, quantitative analysis is used to determine the factors that influence mode choice during and after COVID-19 with multiple linear regression analysis using SPSS 23.0 software. Then the results of the linear regression equation will be entered into a binary logit model to determine the probability of choosing a transportation mode during and after COVID-19. The research results show that two utility function equations were obtained from linear regression analysis, namely the utility function during COVID-19, $Y = 0.164 - 0.040 X_1 - 0.102 X_2 + 0.044 X_3 - 0.042 + 0.083 X_{10} + 0.019 X_{11} - 0.003 X_{12} + 0.003 + 0.008 X_6 - 0.039 X_7 + 0.036 X_8 + 0.080 X_9 + 0.005 X_{10} + 0.083 X_{11} - 0.126$ From these results it is known that there are nine variables that partially influence mode choice during COVID-19, namely gender, occupation, income, vehicle ownership, travel intent, travel time, security and safety considerations, access considerations, and infection concerns; and there are eight variables that partially influence mode choice after COVID-19, namely age, gender, occupation, income, vehicle ownership, travel purpose, travel time, hygiene considerations. So the results obtained were that the probability of choosing a mode during COVID-19 was 59% choosing private transportation and 41% choosing public transportation, whereas after COVID-19 it was 55% choosing private transportation and 45% choosing public transportation.

Keywords: Mode Choice, Factors Influencing Mode Choice, Binary Logit Method, Covid-19.