



The Influence of Price, User Experience, and Service Innovation on the Decision to Use Transjakarta Transportation Modes

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Abstract

Increasing urbanization in Jakarta demands an efficient and affordable transportation system. This study aims to determine the relationship between price, user experience, and service innovation to the decision of TransJakarta transportation mode users. This study used a quantitative method with 100 respondents of TransJakarta users in Bekasi. Data processing was performed using SPSS26. Multiple linear regression analysis showed that price had a positive and significant effect on usage decisions, and service innovation also had a positive and significant effect. However, user experience had a positive but insignificant effect. The regression model explains 81.2% of usage decisions. Recommendations are given to improve service quality, set competitive prices, and develop innovations to attract more users and reduce congestion. The originality of this research lies in its specific case study on students of Universitas Pelita Bangsa Class of 2021 in Bekasi, providing in-depth insights from a potential user segment.

Keywords: Price, User Experience, Service Innovation, Usage Decisions, TransJakarta

Introduction

Public transportation is a vital element of urban life, especially in large cities like Jakarta, where rapid population growth and urbanization demand an efficient and affordable transportation system. TransJakarta, as one of the bus rapid transit (BRT) modes in Indonesia, is expected to be a solution to address congestion and improve public mobility. However, to achieve this goal, it is important to understand the factors that influence users' decisions in choosing this mode of transportation.

In recent years, TransJakarta has seen a significant increase in ridership, but this trend does not always reflect stability in public usage decisions. Data from the Central Statistics Agency (BPS) of DKI Jakarta Province in 2023 showed fluctuations in daily TransJakarta passenger numbers, influenced by various factors such as service conditions, pricing, and traffic conditions. Although TransJakarta offers various advantages, such as dedicated lanes and affordable fares, many people are still reluctant to switch from private vehicles to this public transportation. This indicates that the decision to choose a mode of transportation is not solely based on price, but also on user experience and service innovation.

Previous research has examined the influence of price, user experience, and service innovation on transportation usage decisions. Christian RN Daeng, Joula Rogahang, and Olivia Walangitan (2023) found that price significantly influences the decision to use online transportation services. Januardi M. Diah, Abdullah, and Charlyna S. Purba (2020) also identified price as a significant factor in the decision to use online transportation services. Regarding user experience, Devi MK, Pramana AYE, and Safitri R. (2022) and Fitriani (2020) showed that positive experiences significantly contribute to the decision to continue using public

transportation services. Meanwhile, Dewi, CP, and Larasati, E. (2022) and Alfina Asma'ul Khasanah, Adi Santoso, and Naning Kristiyana (2024) found that service innovation significantly impacts the decision to use public transportation and service-based applications.

However, there remains a gap in understanding the simultaneous interaction of these three factors, particularly in the context of TransJakarta users in the Bekasi area, with a focus on the student segment. This study seeks to fill this gap by comprehensively analyzing the influence of price, user experience, and service innovation on the decision to use TransJakarta transportation among students from Pelita Bangsa University, class of 2021. The uniqueness of this study lies in its specific demographic and location focus, which can provide valuable insights into the preferences and needs of this potential user group. This research is crucial for formulating more effective policies to improve the quality and attractiveness of public transportation services.

The purpose of this study is to determine how much influence price partially has on the decision to use TransJakarta transportation mode, to determine how much influence user experience partially has on the decision to use TransJakarta transportation mode, to determine how much influence service innovation partially has on the decision to use TransJakarta transportation mode, and to determine how much influence price, user experience, and service innovation simultaneously have on the decision to use TransJakarta transportation mode.

Method

This study uses a quantitative research type with an associative descriptive approach, which aims to explain the causal relationship between the variables studied. This approach allows researchers to test hypotheses and find causal relationships between variables. The research design used is causal-comparative research, which focuses on comparative analysis to find causal relationships between independent variables (Price, User Experience, Service Innovation) and the dependent variable (TransJak Arta Transportation Mode Use Decision).

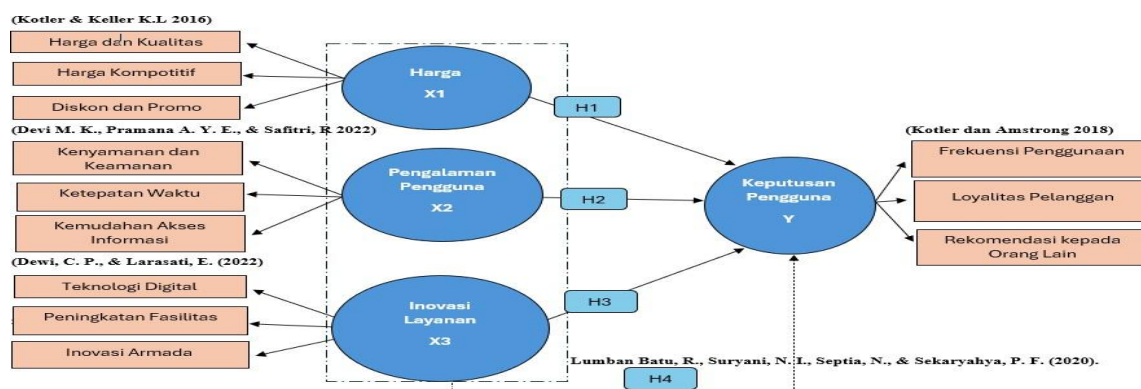


Figure 1. Research Design
Source: Author (2025)

The research location was carried out in Bekasi, with the research time adjusted to the predetermined schedule.

No	Uraian kegiatan	Okt	Nov	Des	Jan	Feb	Mar	Apr	Mei	Jun
1	Observasi									
2	Penyusunan proposal skripsi									
3	Bimbingan proposal skripsi									
4	Sidang proposal skripsi									
5	Bimbingan skripsi									
6	Pengolahan data									
7	Penyampaian hasil									
8	Sidang Skripsi									

Figure 2. Research Schedule
Source: Data Processed by the Author, 2025

This study uses a quantitative method with a positivist approach, aiming to test the formulated hypotheses through statistical analysis. The research design is causal-comparative, which attempts to analyze the causal relationship between the independent variables (price, user experience, service innovation) and the dependent variable (the decision to use TransJakarta transportation).

The population in this study were users of the TransJakarta Bus Rapid Transit (BRT) service in Bekasi. Since the exact population size was unknown, the researcher used the Lemeshow formula to determine the sample size. With a 95% confidence level ($Z=1.96$), maximum estimate ($P=0.5$), and sampling error ($d=0.10$), the sample size was 96.04, rounded up to 100 respondents. The sampling method used was purposive sampling, with the criteria for respondents aged 18 years and above and being Bekasi residents who use TransJakarta.

Data Collection Data was collected using a questionnaire distributed online to respondents. This questionnaire uses a Likert scale with a score range of 1 to 5, where 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5 = Strongly Agree. The data collected consisted of primary data (via direct questionnaires from respondents) and secondary data (from books, journals, articles, and related official websites).

Data Analysis Method Data analysis was carried out using IBM SPSS Statistics 26 software. The analysis stages include:

- a) **Validity Test:** Using a comparison of the calculated r value with the r table ($df = N-2 = 98-2 = 96$ at $\alpha = 0.05$, r table = 0.198). The item is declared valid if r count $>$ r table.
- b) **Reliability Test:** Using Cronbach Alpha. A variable is considered reliable if the Cronbach Alpha value is $>$ 0.70.
- c) **Classical Assumption Test:**
 1. **Normality Test:** Performed using the Kolmogorov-Smirnov One-Sample Test, Probability Plot Graph, and Histogram Graph. Data is considered normal if the significance value (Asymp. Sig. 2-tailed) $>$ 0.05 or if the points on the graph are spread around the diagonal line.
 2. **Multicollinearity Test:** Performed by examining the Tolerance and VIF values. There is no multicollinearity if the Tolerance value is $>$ 0.10 and the VIF is $<$ 10.
 3. **Heteroscedasticity Test:** Performed using scatterplot analysis. There is no

heteroscedasticity if the points are spread out without a clear pattern above and below the number 0 on the Y-axis.

- d) Multiple Linear Regression Analysis: Used to test the simultaneous and partial influence of independent variables on the dependent variable. The regression model used is: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$ (1) Where: Y = Usage Decision; α = Constant; $\beta_1, \beta_2, \beta_3$ = Regression coefficients; X_1 = Price; X_2 = User Experience; X_3 = Service Innovation; ε = Error term.
- e) Hypothesis Testing:
 1. Partial t-test: Tests the influence of each independent variable on the dependent variable. The hypothesis is accepted if the significance value is < 0.05 and $t \text{ count} > t \text{ table}$ ($t \text{ table} = 1.660$ for $df = 94$).
 2. F Test (Simultaneous): Tests the collective influence of independent variables on the dependent variable. The hypothesis is accepted if the significance value < 0.05 and $F \text{ count} > F \text{ table}$.
- f) Coefficient of Determination (R^2) Test: Measures how much of the variation in the dependent variable can be explained by the independent variables. The R^2 value ranges from 0 to 1.

Results

This study involved 98 respondents who used the TransJakarta BRT in Bekasi. Respondent characteristics showed that 53.1% were female and 46.9% were male. The majority of respondents were aged between 26-35 years (42.9%) and 36-45 years (36.7%). Based on occupation, 57.1% of respondents were private employees, followed by self-employed (25.5%). The highest level of education for respondents was high school (53.1%), followed by bachelor's degree (32.7%).

The validity test results show that all statement items for the variables Price (X_1), User Experience (X_2), Service Innovation (X_3), and Usage Decision (Y) are valid, because the calculated r value for each item is greater than the table r (0.198). This indicates that the questionnaire used is able to measure what should be measured.

Furthermore, the reliability test results show that all variables have Cronbach's Alpha values above 0.70, namely Price (0.898), User Experience (0.875), Service Innovation (0.917), and Usage Decision (0.957). This confirms that the research instrument has high internal consistency and is reliable.

The classical assumption test has also been conducted. The results of the normality test using the One-Sample Kolmogorov-Smirnov Test show an Asymp. Sig. (2-tailed) value of 0.089, which is greater than 0.05, indicating that the data is normally distributed. Visualization through histogram graphs and Normal Probability Plots also support the assumption of normality. The multicollinearity test shows that all independent variables have a Tolerance value above 0.1 and a VIF value below 10, so there is no multicollinearity problem in the model. Finally, the heteroscedasticity test through the scatterplot graph shows that the points spread without a clear pattern above and below the number 0 on the Y-axis, indicating the absence of heteroscedasticity.

Multiple linear regression analysis produces the equation: $Y = -1.096 + 0.657X_1 - 0.040X_2 + 0.437X_3$. The results of the t-test (partial) show that the Price variable (X_1) has a calculated t value of 7.681 with a significance of 0.000, which means that Price has a positive and significant effect on the Usage Decision (Y). The Service Innovation variable (X_3) has a

calculated t value of 5.558 with a significance of 0.000, indicating a positive and significant effect on the Usage Decision (Y). However, the User Experience variable (X2) has a calculated t value of -0.494 with a significance of 0.622, which means that User Experience does not have a significant effect on the Usage Decision (Y).

The results of the F test (simultaneous) show a calculated F value of 135.748 with a significance of 0.000. This indicates that the variables Price, User Experience, and Service Innovation simultaneously have a significant influence on the Usage Decision.

Finally, the results of the coefficient of determination (R^2) test show an R Square value of 0.812 and an Adjusted R Square of 0.806. This means that 81.2% of the variation in the Usage Decision can be explained by the variables Price, User Experience, and Service Innovation, while the rest is explained by other factors outside the model.

Discussion

This study analyzes the influence of price, user experience, and service innovation on the decision to use TransJakarta transportation. Findings indicate that price and service innovation have a significant influence, while user experience does not show a statistically significant effect.

The influence of price on TransJakarta usage decisions is very clear in this study. The high t-value and low significance indicate that price is a strong determinant. A positive coefficient indicates that competitive and affordable prices encourage increased usage decisions. This finding is consistent with Kotler and Keller's (2016) marketing theory, which states that price is a crucial element in the marketing mix that influences consumer decisions. Previous research by Christian R.N. Daeng, Joula Rogahang, and Olivia Walangitan (2023) and Januardi M. Diah, Abdullah, and Charlyna S. Purba (2020) also supports that price has a significant impact on transportation usage decisions. This confirms that TransJakarta needs to maintain an attractive and transparent pricing strategy to attract and retain users.

On the other hand, user experience showed a statistically insignificant effect on usage decisions. While intuitively, positive experiences such as convenience and safety should be important, these results indicate that in the context of TransJakarta in Bekasi, other factors may be more dominant in triggering initial usage decisions or usage frequency. The small negative coefficient suggests that the effect of user experience, while present, is not strong enough to achieve statistical significance in this model. This could be due to varying user experiences or because other factors such as price and service innovation carry a much greater weight in decision-making. However, previous research by Fitriani (2020) and Devi MK, Pramana AYE, and Safitri R. (2022) suggests that positive experiences contribute to satisfaction and loyalty. This difference may be due to the specific context (e.g., university students in Bekasi) or to complex interactions with other variables not fully captured in this model.

Service innovation has been shown to have a positive and significant influence on user decisions. This finding aligns with Prahalad and Ramaswamy's (2004) view that service innovation focused on user experience can create significant added value. TransJakarta's use of digital technology, facility improvements, and fleet innovations effectively attract users. Research by Dewi, CP, and Larasati, E. (2022) and Alfina Asma'ul Khasanah, Adi Santoso, and Naning Kristiyana (2024) also confirms the importance of innovation in transportation services and applications. This indicates that TransJakarta's innovative efforts, such as mobile applications and digital payment systems, are highly valued by users and are a key driver of their decision to use the service.

Simultaneously, price, user experience, and service innovation significantly influence the

decision to use TransJakarta transportation. The high F-value and low significance confirm that this regression model is feasible and has good predictive power. The coefficient of determination (R^2) of 81.2% indicates that these three variables collectively explain most of the variation in usage decisions. This underscores the importance of a holistic approach in managing public transportation services, where competitive pricing must be balanced with continuous innovation to attract and retain users. Although user experience is partially insignificant, its contribution in the simultaneous model remains, indicating that in combination with price and innovation, experience remains an integral part of the user decision ecosystem.

Conclusion

Based on the results of the regression analysis that has been carried out, several important points can be concluded regarding the influence of price, user experience, and service innovation on the decision to use the TransJakarta transportation mode:

1. Price has a positive and significant influence on the decision to use TransJakarta. This indicates that competitive and affordable pricing is a key factor in encouraging people to choose this mode of transportation.
2. User experience did not demonstrate a statistically significant influence on the decision to use TransJakarta. While this does not negate the practical importance of user experience, its influence in this model is not strong enough to reach statistical significance.
3. Service innovation has a positive and significant influence on TransJakarta usage decisions. The development and implementation of new ideas, such as digital technology, facility improvements, and fleet innovations, effectively increase service appeal and drive usage decisions.
4. Simultaneously, price, user experience, and service innovation significantly influence the decision to use TransJakarta transportation. The regression model developed has a high ability to explain variation in usage decisions, with 81.2% of the variation explained by these three variables.

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