Influence of System Quality and Information Quality on Gojek Application User Satisfaction

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ABSTRACT

The quality of the system and the quality of information can influence user satisfaction with online transportation applications. This study aims to determine the influence of system quality and information quality on user satisfaction with the Gojek application among students at the Faculty of Economics and Business (FEB), Unjani. This research utilizes a quantitative survey method with a research instrument in the form of a questionnaire. The sample size consists of 100 active students from FEB, Unjani. The results of the statistical analysis indicate that the system quality variable produces a t-value < t-table and a Sig-value > α. On the other hand, the information quality variable produces a t-value > t-table and a Sig-value < α. The results of the F-test show that the calculated F-value is greater than the tabulated F-value, and the significance level (p-value) is 0.000 < 0.05. Thus, it can be concluded that partially, system quality does not have an influence on user satisfaction with the Gojek application among students at FEB, Unjani, while information quality does have an influence on user satisfaction with the Gojek application among students at FEB, Unjani. Simultaneously, both system quality and information quality have an influence on user satisfaction with Gojek among students at FEB, Unjani.

Introduction

Gojek is an application under PT Go-Jek Indonesia. Since 2015, the Gojek application has gained significant popularity among the Indonesian community and has emerged as a widely used offline transportation platform. The use of Gojek is expected to facilitate the public in accessing transportation modes and other services such as food and goods delivery (Junior 2018). Data from the Economy Institute for Development of Economics and Finance (INDEF) in 2020 shows that the number of active monthly Gojek users in Indonesia has reached 38 million, with 3.7 million partners. These figures indicate the significant impact of Gojek's emergence (Fakhriyah 2020). The convenience offered by Gojek has made it popular among students. Young people tend to have a fast-paced, dynamic, effective, and efficient lifestyle. Gojek's advantages, such as affordable fares, ease of finding drivers,
promotional offers, and high accessibility, make it favored by students (Rahman and Nurhastuti 2016). Despite its widespread use and popularity, especially among students, the Gojek application still receives numerous complaints.

A preliminary survey was conducted among 37 students from FEB, Unjani. Of these, 62.2% were accounting students, while 37.8% were management students. Overall, 59.5% of the students claimed to be dissatisfied when using the Gojek application, while only 40.5% stated they were satisfied. Regarding Gojek's system quality, 21.6% of the students felt satisfied, while 35.1% felt less satisfied. Another 43.2% of students expressed complete dissatisfaction with the system quality of the Gojek application. 24.3% students felt satisfied with Gojek's information system, while 27% felt less dissatisfied. Another 48.6% of students expressed complete dissatisfaction with the information quality of the Gojek application. Several complaints related to this issue include poor customer service and being assisted by automated bots, promotional vouchers that cannot be used despite having sufficient Gopay balance, disrupted application systems resulting in duplicate orders, account freezing without any reason, difficulties in finding addresses, account bans, and inability to change addresses.

The emergence and popularity of online transportation have enabled users to access driver partners, allowing for easy and fast mobility (Sugianto and Kurniawan 2020). The quality and functionality level of online transportation technology should be supported by good system quality and information quality.

System quality is related to the presence of disruptions in the system, consistency in user interfaces, user-friendliness, documentation quality, and program code quality and maintenance (Petter, DeLone, and McLean 2013). System quality can assist applications in processing data and making informed decisions, thereby fulfilling user needs (Tulodo and Solichin 2019).

Information quality refers to the perception formed within users regarding the information received as an output of data processing within the system (Prayanthi, Lompoliu, and Langkedeng 2020). The information provided in online transportation system applications should be accurate and reliable, allowing users to easily comprehend it (Vicramaditya 2021).

Both aspects subsequently influence user satisfaction. User satisfaction indicates that the services provided by an application have met the expectations of its users. User satisfaction plays a crucial role in ensuring the sustainability of a business, creating loyalty among existing customers, and attracting new users (Nurakbar and Susanti 2021).
The above phenomenon indicates that the source of user dissatisfaction lies in the system quality and information quality of Gojek. These two aspects have been proven in various studies to influence user satisfaction (Granita 2019). However, research in the student population is still limited, despite the high demand in this group. There is a research gap in research regarding the effect of system quality and information quality on satisfaction of Gojek users among college students. Therefore, this study aims to determine the influence of system quality and information quality on user satisfaction with the Gojek application among students at FEB, Unjani.

**Literature Review**

**Technology Acceptance Model (TAM)**

The Technology Acceptance Model (TAM) is a model used to understand the predictors of human behavior towards the potential acceptance or rejection of technology. The primary determinants that impact the Technology Acceptance Model (TAM) are the perceived ease of use and perceived usefulness, which ultimately result in user acceptance of the technology (Granić and Marangunić 2019). TAM aims to predict whether a new technology can be accepted among users. Acceptance is assessed based on the design of the information system and the utility of the features offered by the technology (Kamal, Shafiq, and Kakria 2020). TAM is a model, theory, or approach used to investigate whether users accept a particular technology. TAM can be utilized to measure user satisfaction based on the quality and usefulness of the respective technology.

**User Satisfaction**

Satisfaction refers to the match between users’ expectations and their actual experience. If the user's experience does not meet their expectations, satisfaction is not fulfilled (Ari, Hanum, and Latifah 2021). User satisfaction is also defined as a measurement that determines how satisfied customers are with the product, service, or output of a system. User satisfaction can lead to loyalty and reuse of a system (Chen et al. 2019).

User satisfaction can arise when user expectations are met based on their experience using a system. System quality and information quality can influence consumer ease, which ultimately leads to user satisfaction (Isnaini and Udayana 2019). Information quality also affects satisfaction by indicating whether the information in a product has met consumer expectations (Amarin and Wijaksana 2021).
$H_1$ : There is an influence between system quality and information quality on user satisfaction of Gojek.

**System Quality**

System quality is described as the good or bad characteristics of a system related to its operational aspects. System quality is a measure of information processing that includes software and data components, as well as technical system (Benmoussa et al. 2018). System quality can also be defined as the users' perception of information retrieval capability and mobile application performance (Phuong and Trang 2018).

Information quality refers to the measure of how well information can be understood by its recipients (Amarin and Wijaksana 2021). Information quality can assist users in understanding an application. Good, relevant, and accurate information can make users want to continue using the application because they feel satisfied. A study conducted by Amalia & Pratomo (2016) demonstrated that information quality partially has a positive influence on user satisfaction of Gojek.

$H_2$ : There is an influence between system quality on user satisfaction of Gojek.

**Information Quality**

Information quality pertains to the assessment of how effectively information is comprehended by those receiving it (Amarin and Wijaksana 2021). Another interpretation defines information quality as the result of a system's processing that is deemed acceptable by users. When information possesses good quality, it tends to generate more favorable reactions from users (Fendini 2020).

System quality not only describes the measures of a system but also how the system interacts with its users. This interaction enables users to operate a system (Fendini 2020). A competent system quality allows users to operate an application more easily. Furthermore, system quality should be tailored to meet user needs in order to fulfill expectations and achieve user satisfaction.

Research conducted by Septianita et al. (2014) indicates that system quality has a positive influence on user satisfaction. This aligns with the findings of Widodo et al. (2016), which also demonstrate a positive impact of system quality on user satisfaction. This implies that the better the system quality, the higher the level of user satisfaction.

$H_3$ : There is an influence between information quality on user satisfaction of Gojek.
Method

This study employed a quantitative survey method with a survey research instrument using a questionnaire administered through Google Forms. The study was conducted at the Faculty of Economics and Business, Jenderal Achmad Yani University (FEB Unjani) in Cimahi. The population involved in this study was all the students of FEB Unjani. The inclusion criteria for the sample in this study were: (1) active students of FEB Unjani, and (2) active users of the Gojek application. The sample size was determined using Yamane's formula, resulting in a sample size of 100 active FEB Unjani students.

System quality is defined as the measure of information processing that encompasses software, data components, and technical system health (Benmoussa et al. 2018). According to Fendini (2020), system quality can be measured using the following five dimensions, namely reliability, flexibility, integration, and accessibility. Information quality refers to a measure of how information can be understood by the recipient (Amarin and Wijaksana 2021). According to Amarin & Wijaksana (2021), the indicators for measuring information quality are accuracy, relevance, completeness, and understandability. Satisfaction is defined as the match between the user's expectations and the experience he feels. If the experience felt by the user does not reach his expectations, then satisfaction is not fulfilled (Ari, Hanum, and Latifah 2021). There are five dimensions that can be used to measure user satisfaction, namely content satisfaction, accuracy satisfaction, format satisfaction, speed satisfaction, and ease satisfaction (Fendini 2020).

Data analysis was conducted using statistical tests and descriptive analysis. Descriptive analysis, also known as unidimensional analysis or univariate analysis, was used to describe the characteristics and response scores of the participants. Statistical tests began with testing validity to ensure the collected data were valid and reliable. Classical assumption tests included tests for normality, multicollinearity, and heteroscedasticity. The coefficient of determination measures the extent to which the model can explain the variation in the dependent variable. Multiple linear regression analysis aims to determine the influence of system quality and information quality on user satisfaction. Hypothesis testing was conducted using t-tests to examine partial effects and the F-test to examine simultaneous effects. The regression model used in this study is as follows:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \]  

Explanation:
Y = user satisfaction
\[ X_1 = \text{system quality} \]
\[ X_2 = \text{information quality} \]
\[ \beta_0 = \text{Constant, the dependent variable Y when the independent variables } X_1 \text{ and } X_2 \text{ are both zero.} \]
\[ \beta_1 = \text{Coefficient of multiple regression between the independent variable } X_1 \text{ and the dependent variable Y, assuming other independent variables are constant.} \]
\[ \beta_2 = \text{Coefficient of multiple regression between the independent variable } X_2 \text{ and the dependent variable Y, assuming other independent variables are constant.} \]
\[ E = \text{Error term, representing disturbances outside the model.} \]

**Result and Discussion**

**Reliability, Validity, and Classical Assumption Test Results**

The results of the validity test conducted for the system quality, information quality, and user satisfaction variable showed the obtained r-values exceed the critical r-value, indicating the validity of all questionnaire items. Reliability tests were performed using Cronbach's Alpha coefficient, with values > 0.7 indicating good reliability (Sugiyono 2016). The Cronbach's Alpha value obtained for all variables is > 0.7. Thus, it can be concluded that the measurement tools used on the variables of system quality, information quality, and user satisfaction have very good reliability.

The normality test was conducted to examine the distribution of the data. A good regression model assumes a normal or approximately normal distribution of data. The Kolmogorov-Smirnov test of normality was used in this study. The results showed Asymp value. Sig. (2-tailed) obtained is 0.98. This value is greater than 0.05 so it can be concluded that the data in this study are normally distributed.

Multicollinearity occurs when independent variables are highly correlated. The Variance Inflation Factor (VIF) is used to detect multicollinearity, with VIF values less than or equal to 10 indicating no multicollinearity. This study shows that the tolerance value of system quality (X1) is 0.314 (tolerance > 0.1) and information quality is 0.314 (tolerance > 0.1). Meanwhile, the VIF value of each variable is less than 10, namely 3.182 each. Thus, it can be concluded that there is no multicollinearity problem in the regression model.

The heteroscedasticity test performed with the Spearman rank correlation test. The obtained significance value (Sig.) for the system quality variable is 0.897, which is greater than 0.05. Therefore, it can be concluded that there is no heteroscedasticity. Meanwhile, the information quality variable has a significance value (Sig.) of 0.977,
which is also greater than 0.05. Hence, the information quality variable does not exhibit heteroscedasticity.

**Multiple Linear Regression Analysis Results**

Table 4.8 displays the results of multiple linear regression analysis. The obtained constant value is -4.220, and the regression coefficient for the system quality variable is 0.156. Furthermore, the regression coefficient for the information quality variable is 1.170.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized B</th>
<th>Coefficients Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-4.220</td>
<td>3.221</td>
</tr>
<tr>
<td>System Quality</td>
<td>0.156</td>
<td>0.100</td>
</tr>
<tr>
<td>Information Quality</td>
<td>1.170</td>
<td>0.100</td>
</tr>
</tbody>
</table>

*Source: 2023 Data Processing Results*

Based on these results, the simple linear regression equation can be written as follows:

\[ Y = -4.220 + 0.156 + 1.170 + 3.221 \]

**Coefficient of Determination Analysis Results**

The coefficient of determination measures the extent to which the model explains the variation in the dependent variable. The coefficient of determination (R²) ranges between 0 and 1 (0 < R² < 1). An R² value close to 0 indicates limited ability of the independent variables to explain the dependent variable. An Nilai R² value of 1 indicates a greater ability of the independent variables to explain the dependent variable.

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.921</td>
<td>0.848</td>
</tr>
</tbody>
</table>

*Source: 2023 Data Processing Results*

Table 9 shows the results of the coefficient of determination analysis. The obtained R² value is 0.848. The coefficient of determination represents the influence percentage. Hence, multiplying R² by 100% yields a value of 84.8%. Therefore, it can be concluded that the combined influence of system quality and information quality accounts for 84.8% of Gojek user satisfaction, while the remaining 15.2% is attributed to other variables not investigated in this study.
Results of the t-Test Analysis

The t-test statistic shows the partial influence of an independent variable on the dependent variable when other independent variables are considered constant (Sugiyono 2016).

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Quality</td>
<td>1.557</td>
<td>0.123</td>
</tr>
<tr>
<td>Information Quality</td>
<td>11.711</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*Source: 2023 Data Processing Results*

Table 10 shows that the system quality variable produces a t-value of 1.557 and a significance value of 0.123. By using a significance level $\alpha$ (0.05) and degrees of freedom (df) of n-k-1 or 100-2-1 (n=number of respondents and k=number of independent variables), the obtained t-table value is 1.660. This means that the calculated t-value (t-calculated) is less than the t-table value (t-table), and the significance value (Sig.) is greater than $\alpha$. Therefore, the conclusion drawn is that $H_0$ is accepted and $H_1$ is rejected, or in other words, there is no significant influence of system quality on Gojek user satisfaction among FEB Unjani students.

These findings differ from the study conducted by Widodo et al. (2016), which demonstrated a positive influence of system quality on user satisfaction. This implies that the better the system quality, the higher the level of user satisfaction. However, these results align with previous research by Kurniawan, Ardianto, and Hidayatulla (2021). The quality of the system may not have an impact on user satisfaction because other factors, such as the quality of services, including responsiveness and complaint handling in institutions, have not been effective in enhancing user satisfaction. Users may have already set their expectations at a certain level, and even if the system quality is satisfactory, it may not exceed their initial expectations. In such cases, the impact of system quality on user satisfaction may be minimal (Pooya, Abed Khorasani, and Gholamian Ghouzhdi 2020).

Table 10 also shows that the information quality variable produces a t-value of 11.711 and a significance value of 0.000. This indicates that the calculated t-value is greater than the t-table value, and the significance value is less than $\alpha$. Consequently, the conclusion is there is a significant influence of information quality on Gojek user satisfaction among FEB Unjani students.

Information quality can assist users in comprehending an application. Good, relevant, and accurate information can make users want to continue using the
application because they feel satisfied. These findings align with the research conducted by Amalia & Pratomo (2016), which showed that information quality, in a partial sense, has a positive influence on user satisfaction with Gojek. Quality information builds trust and credibility. When users perceive the information provided by an application or service as trustworthy, they are more likely to rely on it and have confidence in the service. This trust contributes to a positive user experience and higher satisfaction levels (Yeo et al. 2021). Moreover, good information quality reduces uncertainty and confusion. Users appreciate clear and concise information that answers their questions and addresses their concerns. When information is readily available and effectively communicated, users feel more confident and satisfied with their interactions (Struijk et al. 2023).

Results of the F-Test Analysis

F-statistical analysis is used to test the hypothesis that a proposed regression model fits the data well. It evaluates the overall significance of the regression model by comparing the variability explained by the model to the residual variability (Motulsky 2014).

<table>
<thead>
<tr>
<th>Table 11. Results of the F-Test Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-value</td>
</tr>
<tr>
<td>270.052</td>
</tr>
</tbody>
</table>

Source: 2023 Data Processing Results

Table 11 shows that the obtained F value is 270.052, with a significance value of 0.000. This value is then compared to the F table in the F distribution table, which is 3.090. Therefore, the calculated F value is ≥ the tabled F value, and the significance level of 0.000 < 0.05. Hence, there is an influence of system quality and information quality on user satisfaction among Gojek users in the students of FEB Unjani.

An application should ideally have good system quality and information quality. Information quality can impact satisfaction by indicating whether the information provided in a product meets consumer expectations (Amarin and Wijaksana 2021). System quality and information quality can also influence consumer convenience, ultimately leading to user satisfaction (Isnaini and Udayana 2019). This aligns with another study conducted in Yogyakarta, which found that system quality and information quality positively affect user satisfaction with Gojek (Granita 2019).

System quality and information quality have a simultaneous impact on user satisfaction. When both aspects are of high quality, they contribute to a positive user experience and enhance overall satisfaction (Li et al. 2021). System quality refers to
the performance, functionality, and reliability of an application or system (Suputra 2019). A well-designed and efficient system provides users with a smooth and seamless experience, minimizing technical issues and delays. This enhances user satisfaction as they can easily navigate the application, perform tasks effectively, and experience fewer disruptions. Information quality, on the other hand, focuses on the accuracy, relevance, and clarity of the information provided to users. When information is reliable, up-to-date, and relevant to users' needs, it helps them make informed decisions and achieve their desired outcomes (Krishna, Ruikar, and Jha 2023). Clear and concise information improves user understanding and reduces confusion, leading to higher satisfaction (Ferreira et al. 2020).

When both system quality and information quality are high, users are more likely to perceive the application as reliable, functional, and trustworthy (Shim and Jo 2020). They can rely on the system to perform tasks smoothly and access accurate and relevant information when needed. This positive user experience, characterized by efficient system performance and valuable information, contributes to overall user satisfaction.

System quality and information quality are crucial factors for the success of Gojek for several reasons. High system quality ensures smooth functionality, fast response times, and minimal technical issues. This improves the overall user experience, making it convenient and efficient for users to access and utilize Gojek’s services (Ginting, Wijaya, and Jung 2021). Users are more likely to have a positive perception of the platform when they encounter a reliable and user-friendly system. Information quality plays a vital role in building trust and credibility among users. When Gojek provides accurate, up-to-date, and relevant information about services, prices, promotions, and other details, it enhances transparency and reliability (Udayana et al. 2021). Users can rely on the information provided, which fosters trust and confidence in the platform.

This study demonstrates the importance of system quality and information quality on user satisfaction among students of FEB Unjani. However, this study has several limitations. Firstly, the sample size in this study is still relatively small compared to the large population of students in Bandung or even in Indonesia. Secondly, this study is quantitative in nature. Further research of an observational nature may be needed to delve more deeply into the influence of system quality and information quality on Gojek user satisfaction among students. Research incorporating variables other than system quality and information quality is needed to further explore factors influencing Gojek user satisfaction among students.
Conclusion

System quality does not have an influence on user satisfaction with the Gojek application among students of FEB Unjani. Meanwhile, information quality has an influence on user satisfaction with the Gojek application among students of FEB Unjani.

References


Motulsky, Harvey. 2014. Intuitive Biostatistics: A Nonmathematical Guide to Statistical


