The Influence of Consumer Confidence, Service Quality, and Product Differentiation Factors on the Success of Online Service Platforms: Case Studies on Online Transportation Platforms in Sukabumi City

Frans Sudirjo¹, Chevy Herli Sumerli A.², Budi Mardikawati³, Loso Judijanto⁴
¹Universitas 17 Agustus 1945 Semarang
²Universitas Pasundan
³Politeknik Transportasi Darat Bali
⁴IPOSS Jakarta, Indonesia

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ABSTRACT

This study investigates the complex dynamics that shape the success of online service platforms in Sukabumi City through quantitative analysis using Structural Equation Modeling with Partial Least Squares (SEM-PLS). Focusing on the interactions between Consumer Trust, Product Differentiation, Service Quality, and Online Service Platform Success, this study took a sample of 245 participants. The measurement model underlined the reliability and validity of the constructs, while the structural model explained the significant relationships. Notably, Consumer Trust and Product Differentiation emerged as strong predictors of platform success. This study contributes nuanced insights for platform operators and policy makers seeking to optimize online service platforms in the specific context of Sukabumi City.

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Corresponding Author:
Name: Frans Sudirjo
Institution: Universitas 17 Agustus 1945 Semarang
e-mail: frans-sudirjo@untagsmg.ac.id

1. INTRODUCTION

The surge in internet penetration and the rise of mobile technology have led to the rapid growth of the online services sector, particularly in the online transport industry. Online transportation applications, such as Gojek, Grab, and Uber, have become integral parts of the urban ecosystem [1]. These platforms provide convenient and efficient ways for consumers to access transportation services at their fingertips [2]. The online transport sector has experienced significant growth in Southeast Asian countries, including Indonesia, Singapore, Thailand, Malaysia, Vietnam, and the Philippines [3]. The development of these platforms has changed consumer behavior, shifting from offline habits to online services [4]. The online transport business is expected to continue expanding, contributing to the growth of the digital economy in these countries [5]. Overall, the online transport sector has become an essential part of modern urban life, providing users with easy access to transportation services through mobile technology [6]–[10].

The digital landscape has undergone a transformative shift with the rise of online
service platforms, revolutionizing consumer interactions with various services. Among these platforms, online transportation services have become essential in modern urban life, offering convenience, efficiency, and a new user experience [7], [11], [12]. The impact of digital mobility services on the mobility landscape is growing, providing users with a wide range of options for their everyday transportation needs [13]. These services have also led to changes in consumer behavior, with individuals shifting from offline habits to online platforms for activities like food delivery [4]. The development of technology and digitalization has made smart assistants and online services more accessible, leading to an increase in online transactions for goods and services [14]. Overall, online transportation services have become a crucial part of the digital landscape, transforming the way people interact with transportation and daily activities.

The city of Sukabumi, located in West Java Province, has the potential for nature tourism and natural resources. However, the government’s attention to the area is lacking, making this potential invisible [15]. The implementation of the Policy on the Arrangement and Empowerment of Street Vendors in Sukabumi City has not been fully realized, leading to chaos caused by street vendors in the city [16], [17]. The Covid-19 pandemic has further impacted street vendors, resulting in a decrease in their income [18], [19]. In addition, the economic environment has affected the process of implementing policies for street vendors, with some of the budget being diverted to Covid-19 handling. Despite these challenges, the Regional Government of Sukabumi City continues to strive for the arrangement and empowerment of street vendors, including the construction of the Pelita Market. The importance of online services in Sukabumi City is evident in the efforts of a digital-based media company, INFOSMI, which aims to provide information and news about the city through its Instagram account @sukabumitoday.

The success of sharing economy platforms in the transportation sector depends on several factors. Firstly, the establishment of trust between consumers and service providers is crucial for their success [20]. Secondly, consistent provision of high-quality services is essential to maintain customer satisfaction and loyalty [21]. Lastly, in crowded markets, platforms need to differentiate their products to attract and retain customers [22]. These factors contribute to the overall success of sharing economy platforms by ensuring customer satisfaction, building trust, and creating a competitive advantage in the market.

In this context, our research seeks to explore the various factors that support the success of online service platforms, with a particular focus on consumer trust, service quality and product differentiation. The interconnectedness of these elements forms a crucible for platform success and sustainability in the highly competitive ride-hailing industry. As ride-hailing platforms continue to reshape urban mobility, it becomes imperative to understand the complex interplay between trust-building mechanisms, service quality dimensions, and distinctive product differentiating features.

2. LITERATURE REVIEW

2.1 Consumer Trust Factors in Online Service Platforms

Consumer trust is a crucial factor in the success of online service platforms. It shapes user behavior and influences their decisions, leading to increased engagement and repeat usage [23]–[26]. Trust in e-commerce and online services encompasses dimensions such as security, privacy, reliability, and transparency. Research shows that trust significantly impacts user acceptance and usage intentions. Users are more likely to engage and continue using online transportation platforms when they perceive a high level of trust in the platform’s ability to safeguard their information, provide secure transactions, and offer reliable services [27]–[29].
2.2 Service Quality in Online Transportation Platforms

Service quality is a critical determinant of customer satisfaction and loyalty in the service industry. In the context of online transportation platforms, service quality extends beyond the physical aspects of the ride to encompass the entire user experience, including ease of booking, waiting time, driver professionalism, and problem resolution. Previous studies emphasize the positive correlation between perceived service quality and user satisfaction in online transportation services [30]–[32]. Users are more likely to continue using a platform when they perceive a consistently high level of service quality [33].

2.3 Product Differentiation in Online Service Platforms

Product differentiation is crucial for online service platforms to stand out in a competitive market. It can be achieved through unique features, innovative technologies, and customized services, which not only attract users but also enhance user loyalty and satisfaction. Research suggests that perceived differentiation positively influences user satisfaction and loyalty in the context of online services. Platforms that effectively differentiate their offerings are more likely to succeed in the crowded online service landscape [34], [35]. Users increasingly seek tailored and unique experiences, making differentiation even more important for platform success [36].

2.4 Theoretical Framework

The theoretical foundation of this study is anchored in several key frameworks. The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) provide insights into the factors influencing user acceptance and adoption of technology, including trust and perceived ease of use [37], [38]. The SERVQUAL model, focusing on service quality dimensions, guides the exploration of the nuanced aspects of service delivery in online transportation platforms [39]. Lastly, the concept of product differentiation draws from strategic management and marketing literature, emphasizing the role of unique value propositions in attracting and retaining customers [40].

3. METHODS

3.1 Type of Research

This research adopts a positivistic research philosophy, which seeks to uncover objective relationships between variables through empirical analysis. A deductive research approach will be used, testing hypotheses derived from existing theories and models. This study follows a quantitative research design, using numerical data to analyze and test relationships between variables.

3.2 Sampling Strategy

The population of this study is active users of online transportation platforms in Sukabumi City. The sample size of 145 users was determined based on statistical considerations to achieve 95% confidence level and 5% margin of error. Random sampling was conducted to ensure representativeness, and efforts will be made to capture demographic diversity and usage patterns.

3.3 Data Collection

A structured questionnaire is used as the main data collection instrument. The questionnaire will be designed based on validated scales from existing literature, capturing variables related to consumer trust factors, service quality dimensions, product differentiation, and perceived platform success. A Likert scale is used to measure respondents' agreement or disagreement with the given statements.

3.4 Data Analysis

The quantitative data collected will be analyzed using Structural Equation Modeling (SEM) with Partial Least Squares (PLS) analysis. PLS-SEM is very suitable for exploring complex relationships in small to medium sized samples (Hair et al., 2017). The analysis will proceed in several steps: Confirmatory Factor Analysis (CFA) will be conducted to assess the reliability and validity of the measurement model. This step involves examining the loadings, cross-loadings,
convergent validity, and discriminant validity of the latent constructs. The structural relationships between the latent constructs will be tested using PLS-SEM. This involves examining the path coefficients, $R^2$ values, and significance of the relationships between consumer trust, service quality, product differentiation, and the success of the online transportation platform. To assess the robustness of the findings, a bootstrapping procedure with a sufficient sample size (5,000) is applied to estimate standard errors and construct confidence intervals around the path coefficients. Although PLS-SEM does not rely on traditional fit indices, model fit will be assessed through measures such as goodness-of-fit (GoF) and standardized root mean square residual (SRMR).

4. RESULTS AND DISCUSSION

4.1 Demographic Participants

The demographic analysis of the study participants provides valuable insights into their characteristics, allowing for a more nuanced interpretation of the results. The age distribution of the participants was broad, with a significant concentration in the 25-34 age group, representing 38% of the respondents. Other age groups were also well-represented, with 18-24-year-olds comprising 22%, 35-44-year-olds at 20%, and the remaining distributed across older age brackets. The gender representation among participants was relatively balanced, with 52% identifying as male and 48% as female. Occupational diversity was evident, with students constituting 28% of the sample, professionals making up 32%, homemakers comprising 18%, and retirees accounting for 7%. A significant majority of participants (72%) reported frequent usage of the online transportation platform, indicating its substantial role in their daily lives. Geographically, participants were distributed across various regions within Sukabumi City, allowing for a comprehensive analysis of localized patterns of platform usage. While socioeconomic status was not explicitly measured, future research could explore participants’ income and education level to provide a more comprehensive understanding of the platform’s impact across different socioeconomic groups.

4.2 Measurement Model

The measurement model’s reliability and validity were assessed through various indicators, including loading factors, Cronbach’s Alpha, Composite Reliability, and Average Variance Extracted (AVE).

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Code</th>
<th>Loading Factor</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Confidence</td>
<td>COC.1</td>
<td>0.884</td>
<td>0.905</td>
<td>0.940</td>
<td>0.840</td>
</tr>
<tr>
<td></td>
<td>COC.2</td>
<td>0.937</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>COC.3</td>
<td>0.928</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Differentiation</td>
<td>PRD.1</td>
<td>0.844</td>
<td>0.775</td>
<td>0.863</td>
<td>0.677</td>
</tr>
<tr>
<td></td>
<td>PRD.2</td>
<td>0.785</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRD.3</td>
<td>0.839</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Quality</td>
<td>SEQ.1</td>
<td>0.791</td>
<td>0.798</td>
<td>0.882</td>
<td>0.714</td>
</tr>
<tr>
<td></td>
<td>SEQ.2</td>
<td>0.877</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEQ.3</td>
<td>0.863</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Success of Online Service</td>
<td>SOSP.1</td>
<td>0.893</td>
<td>0.840</td>
<td>0.904</td>
<td>0.758</td>
</tr>
<tr>
<td>Platforms</td>
<td>SOSP.2</td>
<td>0.877</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOSP.3</td>
<td>0.841</td>
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</table>

The measurement model results provide an assessment of the reliability and validity of the latent constructs, including Consumer Confidence, Product
Differentiation, Service Quality, and the Success of Online Service Platforms (SOSP). For Consumer Confidence, all items exhibit strong loading factors, high Cronbach’s Alpha, high Composite Reliability, and an Average Variance Extracted (AVE) value above the recommended threshold. The Product Differentiation construct shows moderate internal consistency, satisfactory reliability, and an AVE value slightly below the threshold. Service Quality demonstrates good internal consistency, strong reliability, and an AVE value above the threshold. The Success of Online Service Platforms construct exhibits robust associations, excellent internal consistency, strong reliability, and an AVE value above the threshold.

<table>
<thead>
<tr>
<th></th>
<th>Consumer Confidence</th>
<th>Product Differentiation</th>
<th>Service Quality</th>
<th>Success of Online Service Platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Confidence</td>
<td>0.917</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Differentiation</td>
<td>0.714</td>
<td>0.823</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.732</td>
<td>0.823</td>
<td>0.845</td>
<td></td>
</tr>
<tr>
<td>Success of Online</td>
<td>0.653</td>
<td>0.759</td>
<td>0.644</td>
<td>0.871</td>
</tr>
<tr>
<td>Service Platforms</td>
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</tbody>
</table>

Consumer Confidence exhibits strong positive correlations with Product Differentiation ($r = 0.714$), Service Quality ($r = 0.732$), and Success of Online Service Platforms ($r = 0.653$). As Consumer Confidence increases, there is a tendency for users to perceive higher levels of Product Differentiation, Service Quality, and overall success of the online service platforms. Product Differentiation shows positive correlations with Consumer Confidence ($r = 0.714$), Service Quality ($r = 0.823$), and Success of Online Service Platforms ($r = 0.759$). This implies that as users perceive higher levels of Product Differentiation, there is an associated increase in Consumer Confidence, perceived Service Quality, and the overall success of the online service platforms. Service Quality exhibits positive correlations with Consumer Confidence ($r = 0.732$), Product Differentiation ($r = 0.823$), and Success of Online Service Platforms ($r = 0.644$). Higher perceptions of Service Quality are associated with increased Consumer Confidence, Product Differentiation, and perceived success of the online service platforms. The Success of Online Service Platforms shows positive correlations with Consumer Confidence ($r = 0.653$), Product Differentiation ($r = 0.759$), and Service Quality ($r = 0.644$). Users who perceive higher levels of success in online service platforms are more likely to have increased Consumer Confidence, recognize Product Differentiation, and perceive higher levels of Service Quality.
The fit indices for the saturated model and the estimated model indicate a good fit between the structural equation model (SEM) and the observed data. The Standardized Root Mean Square Residual (SRMR) value for the saturated model and the estimated model is 0.103, indicating that the estimated model reproduces the observed data well. The McDonald’s non-centrality index (d_ULS and d_G) also showed similar values for both models (d_ULS = 0.822, d_G = 0.430), indicating a close approximation between the estimated model and the saturated model. The Chi-Square values for both models were identical (304.332), indicating no significant difference between the observed and implied covariance matrices in the models. The Normed Fit Index (NFI) values were also identical for both models (0.730), indicating a good fit of the estimated model compared to the saturated model. Overall, these fit indices support the robustness of the structural equation model in explaining the relationships between latent constructs.

The R-Square and Adjusted R-Square values provide insight into the explanatory power of the model regarding the dependent variable, in this case, Online Service Platform Success. These metrics help assess the proportion of variance in the dependent variable explained by the independent variables in the model.

<table>
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<tr>
<th>Table 4. R Squared</th>
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<tr>
<td>R Square</td>
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<tr>
<td>Success of Online Service Platforms</td>
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</table>

The R-Square value of 0.602 indicates that approximately 60.2% of the variance in the Success of Online Service Platforms is explained by the independent variables (Consumer Confidence, Product Differentiation, and Service Quality) included in the model. The Adjusted R-Square value, which considers the number of predictors in the model, is 0.592. This adjusted value accounts for potential overfitting and penalizes the model for including unnecessary variables. It indicates that, even after adjusting for model complexity, approximately 59.2% of the variance in the Success of Online Service Platforms is explained by the predictors. The high R-Square value suggests that the model, with Consumer Confidence, Product Differentiation, and Service Quality as predictors, effectively captures a significant portion of the variation in users’ perceptions of the Success of Online Service Platforms in Sukabumi City. The Adjusted R-Square value, considering model complexity, reaffirms the model’s explanatory power, accounting for nearly 59.2% of the variance while avoiding the risk of overfitting. These results indicate that the chosen independent variables contribute substantially to the understanding of what drives the success of online service platforms in the specific context of Sukabumi City.
4.3 Hypothesis Test

The SEM analysis uncovered critical insights into the relationships between the latent constructs.

Table 5. Hypothesis Tests Results

|                               | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|-------------------------------|---------------------|-----------------|---------------------------|--------------------------|----------|
| Consumer Confidence ->        | 0.242               | 0.245           | 0.100                     | 2.171                    | 0.003    |
| Success of Online Service     |                     |                 |                           |                          |          |
| Platforms                     |                     |                 |                           |                          |          |
| Product Differentiation ->    | 0.626               | 0.627           | 0.113                     | 5.516                    | 0.000    |
| Success of Online Service     |                     |                 |                           |                          |          |
| Platforms                     |                     |                 |                           |                          |          |
| Service Quality ->            | 0.448               | 0.448           | 0.105                     | 4.412                    | 0.000    |
| Success of Online Service     |                     |                 |                           |                          |          |
| Platforms                     |                     |                 |                           |                          |          |

The regression coefficients and associated T-Statistics provide key insights into the strength and significance of the relationships between each independent variable (Consumer Confidence, Product Differentiation, Service Quality) and the dependent variable (Success of Online Service Platforms). The positive regression coefficient of 0.242 for Consumer Confidence suggests that higher levels of consumer confidence are positively linked to the success of online service platforms. The positive regression coefficient of 0.626 for Product Differentiation underscores the critical role of product differentiation in contributing to the success of online service platforms. The positive regression coefficient of 0.448 for Service Quality highlights the importance of service quality in influencing the success of online service platforms. The T-Statistics values, well above 2 in each case, indicate that these relationships are robust and unlikely to be due to chance. The small p-values further support the conclusion that these relationships are statistically significant.

DISCUSSION

The results of this study confirm the importance of consumer trust, service quality, and product differentiation in influencing the success of ride-hailing platforms in Sukabumi City. The positive relationship between these variables underscores their collective impact on user perceptions and platform success. The consumer trust factor has a significant positive relationship with ride-hailing platform success in Sukabumi City, indicating the important role of trust in shaping user perceptions and loyalty [41]. The service quality dimension also shows a strong positive relationship with platform success, as users’ perceptions of service quality significantly contribute to their overall assessment of platform success [42]. In addition, product differentiation has a positive and significant relationship with platform success, as unique features and offerings contribute to users’ positive evaluation of platform success [43]. These findings are consistent with previous research, which highlights the importance of trust, service quality, and product differentiation in driving the success of vehicle booking platforms.

Implications for Practice

Practitioners in the ride-hailing sector should prioritize initiatives that increase consumer trust, consistently deliver high-quality services, and focus on product differentiation to remain competitive. The partial mediation effect suggests that a holistic approach, which addresses both trust-building and service/product excellence, is critical to optimizing platform success.

Local Context Considerations

The above findings emphasize the relevance of understanding and catering to
the unique sociocultural and economic dynamics of Sukabumi City. Tailoring trust-building mechanisms, service quality improvements, and product differentiation strategies to align with local preferences is critical for continued success.

**Limitations and Future Research**

Recognizing the limitations, such as the cross-sectional nature of the study, future research could adopt a longitudinal approach to explore the dynamics of user perceptions over time. In addition, qualitative research could provide deeper insights into specific aspects of trust, service quality, and product differentiation that resonate with users in Sukabumi City.

5. CONCLUSION

In conclusion, this study provides a robust examination of the factors influencing the success of online service platforms in Sukabumi City. The study underscores the critical role of Consumer Trust and Product Differentiation, which reveal a direct and significant impact on platform success. Service Quality, although statistically significant, introduces a nuanced layer of mediation in the relationship dynamics. A comprehensive analysis of demographic factors adds depth to the interpretation of the results, by recognizing the diverse user characteristics that shape platform outcomes. These findings offer actionable insights for industry stakeholders to strategically improve user experience and optimize platform success. As the digital landscape evolves, continuous monitoring and adaptation of strategies is essential to align with changing user preferences and market trends in Sukabumi City.

**REFERENCES**


[42] R. Wisianto and K. Keni, “PENGARUH KONTRAK BUATAN PENGGUNA (UGC) DAN KONTRAK BUATAN PERUSAHAAN (FGC) TERHADAP LOYALITAS MEREK SMARTPHONE DI INDONESIA DENGAN...