



Optimizing Customer Satisfaction on the Shopee E-Commerce Platform: A Comprehensive Analysis of E-Logistics Mediated by Electronic Service Quality and Feature Utilization

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Abstract:

This research aims to evaluate the influence of e-logistics, e-service quality, and feature usage on customer satisfaction in the context of Shopee application usage in Indonesia. Through data analysis, the results in Table 2 indicate that hypotheses 1 to 5 are accepted with significant path coefficients. Thus, a strong positive influence is found between the variables e-logistics, e-service quality, feature usage, and customer satisfaction. Furthermore, the results of testing hypotheses 6 and 7 in Table 3 reveal that e-service quality successfully mediates the influence of e-logistics on customer satisfaction effectively, while the hypothesis 7 regarding feature usage as a mediator is not proven to be significant. This research underscores the importance of enhancing electronic service quality (e-service quality) as an effective strategy to improve customer satisfaction in the context of e-commerce, particularly on the Shopee platform.

Keywords: employee performance; emerging market; Organizational Culture; Work Environment; Work Motivation.

Introduction

The objective of this research is to make a significant contribution to understanding the factors influencing customer satisfaction in the context of e-commerce, with a specific focus on the Shopee application in Indonesia. Through in-depth analysis of the variables e-logistics, e-service quality, and feature usage, this study aims to identify the direct relationships and influences of these factors on customer satisfaction. Additionally, the research objectives include gaining further insights into the mediating roles of e-service quality and feature usage in moderating the relationship between e-logistics and customer satisfaction. Thus, it is expected that this research will provide strategic insights for e-commerce companies, especially Shopee, in enhancing service quality and user experience to achieve optimal customer satisfaction.

Theoretical Review of Literature

Technology has become an inseparable element in everyday life, particularly with the advent of society into the 4.0 era. The majority of activities, such as ordering food, transportation, and shopping, have transitioned to online platforms, becoming a common practice for the broader community today. Based on data obtained from (<https://indonesiabaik.id/infografis/pengguna-internet-di-indonesia-makin-tinggi>), it shows that internet usage in Indonesia is steadily increasing each year. In the 2022-2023 period, it reached 215.63 million people, reflecting a 2.67% increase compared to the previous period. One significant use of the internet is online shopping, and as reported by (<https://info.populix.co/articles/ecommerce-indonesia/>), Shopee dominates the market share, being the platform of choice for the majority of the Indonesian population. Online shopping provides customers with the

convenience of ordering goods without having to go to physical stores, solely by using the internet. Other advantages include comfort, 24-hour store accessibility, and the ability to easily compare products. Previous research (Ch & Gupta, 2017) indicates that design aesthetics, information quality, and image attractiveness significantly influence customer satisfaction in using online shopping applications. This emphasizes the importance of these factors, along with other elements such as e-logistics, e-service quality, and application features, in understanding consumer behavior.

Through this research, we will focus the analysis on the influence of application features on customer satisfaction and how electronic service quality moderates the relationship between e-logistics and customer satisfaction. Thus, this study is expected to provide in-depth insights into the complex dynamics that affect customer satisfaction in the context of Shopee e-commerce in Indonesia. Customer satisfaction in the context of e-commerce is obtained through providing optimal service quality and information on web pages or applications (Lee & Lee, 2019). These factors create a response of feeling satisfied with the services and products offered on the e-commerce platform. However, research conducted by (Akil & Urgan, 2022) shows that several indicators which are e-logistics factors have a positive influence on customer satisfaction, but the level of influence is relatively low. For example, Order Accuracy has an influence of 0.270, Order Condition of 0.177, timeliness of 0.140, and Order Discrepancy Handling of 0.266. According to research conducted (Tran et al., 2023), the results showed that several indicators in e-logistics do not affect customer satisfaction. With this research, researchers will research in different places to test whether the results are the same in other places or not and Researchers also added mediating variables to this research.

The research conducted (Ahmad Khan et al., 2021) investigated the influence of e-logistics on customer satisfaction by considering the mediating role of Information and Communication Technology. The results of this research confirm that the relationship between e-logistics and customer satisfaction is not direct, but requires mediation variables. Customer satisfaction in the context of e-commerce is obtained through the provision of optimal service quality and information on the website or application (Lee & Lee, 2019). These factors create a favorable emotional response to the services and products offered on the e-commerce platform. However, research conducted by (Akil & Urgan, 2022) indicates that some indicators representing e-logistics factors have a positive influence on customer satisfaction, but the level of influence is relatively low. For example, Order Accuracy has an influence of 0.270, Order Condition is 0.177, timeliness is 0.140, and Order Discrepancy Handling is 0.266. According to a study by (Tran et al., 2023), some indicators in e-logistics do not affect customer satisfaction. With this research, the researcher will investigate in a different location to test whether the results are similar or not. The researcher also adds a mediating variable to this study. A study conducted by (Ahmad Khan et al., 2021) examined the influence of e-logistics on customer satisfaction considering the mediating role of Information and Communication Technology. The results of this study confirm that the relationship between e-logistics and customer satisfaction is not direct but requires the mediation of intermediary variables.

Based on the findings of the conducted research, the researcher intends to deepen the understanding of the identified factors. To achieve this, the researcher plans to add a mediating variable to the relationship between e-logistics and customer satisfaction. As a potential mediating variable, e-service quality is considered to play a crucial role in detailing the dynamics of this interaction, as found in a study by (Primadi Andri¹, Farida Jasfar², 2022). The findings affirm that e-service quality has the ability to exert a positive influence on customer satisfaction. By adding e-service quality as a mediating variable, this study aims to explore the extent to which e-service quality can act as a mediator connecting e-logistics to customer satisfaction. Through these efforts, it is hoped that this research will make a significant contribution to our understanding of key factors influencing the level of customer satisfaction in the online shopping experience.

Feature usage in an application refers to how consumers use and benefit from various features provided, such as images and existing functions. In a study conducted by (Ch & Gupta, 2017), it was found that feature usage is one of the factors influencing customer satisfaction. The researchers put forth a reasonable argument that feature usage can play a mediating role in the relationship between e-logistics and customer satisfaction. This approach is expected to provide a more comprehensive understanding of the relationship between e-logistics, e-service quality, and customer satisfaction in the context of e-commerce. By strengthening this conceptual model, the research aims to identify the extent to which e-service quality acts as a mediator moderating the influence of e-logistics on customer satisfaction, opening opportunities for a deeper understanding of the factors affecting the quality of the customer experience in online shopping.

H 1: There is a direct influence of e-logistics on customer satisfaction.

H2: There is a direct influence of e-logistics on e-service quality.

H3: There is a direct influence of e-service quality on customer satisfaction.

H4: There is a direct influence of e-logistics on feature usage.

H5: There is a direct influence of feature usage on customer satisfaction.

H6: There is a significant influence of e-logistics on e-service quality through the mediation of e-service quality.

H7: There is a significant influence of e-logistics on e-service quality through the mediation of feature usage.

Method

This research involved 42 respondents specifically selected from the population of students aged 17-24 years at the Universitas Pendidikan Indonesia who have used the Shopee e-commerce platform. The selection of this population was made because the researcher aimed to focus the study on the age group categorized as students, considering them as a potential user group in applying e-commerce technology.

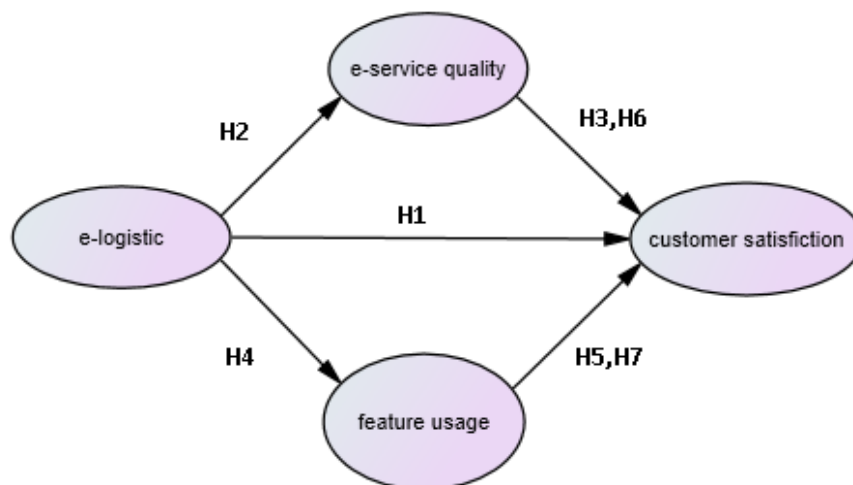


Figure 1. Research Model

The research population, in general, consists of users of the Shopee application; however, for the purposes of this study, the researcher limited the population to students of the Universitas Pendidikan Indonesia. This was done to ensure that the obtained data is more focused and relevant to the campus environment. Although the overall number of Shopee users is unknown or considered infinite, restricting the population to students from a specific university is expected to provide a more controlled and relevant context to achieve the research objectives. With this approach, it is hoped that the research results can offer deeper insights into the usage of the Shopee application among students at the Universitas Pendidikan Indonesia.

Questionnaire development

The questionnaire for this research was distributed online to facilitate access and participation of respondents in responding to questions related to their experiences using the Shopee application. The questionnaire consisted of 24 carefully formulated questions designed to detail the views and experiences of Shopee application users. As a prerequisite, respondents without experience using the Shopee application were asked not to proceed with

answering subsequent questions. Out of the 43 respondents who participated in this questionnaire, only one respondent had never used the Shopee application. Therefore, data analysis in this study will be conducted on the 42 responses from individuals with experience using the Shopee application. In the questionnaire structure, there are 12 indicators covering three modified research variables to make it easier for respondents to understand. Each variable has three respective indicators. Evaluation of these factors was done using a Likert scale from 1 to 5, where 1 means 'strongly disagree' to 5 'strongly agree'. This method was chosen to provide a clear assessment framework for respondents' perceptions and opinions regarding the variables investigated in this study.

Data analysis technique

Data analysis in this research utilizes the Structural Equation Modeling (SEM) approach. According to (Luhur Prianto et al., 2020) the PLS-SEM technique was chosen as an effective analysis method for ordinal data that tends to have a non-normal distribution. PLS-SEM involves Confirmatory Factor Analysis (CFA), where underlying indicators are tested for their relevance, while latent constructs are analyzed for their reliability and validity. The next steps include path analysis to verify the existence of relationships according to the research hypotheses. In the context of this research's conceptual model, the same approach is applied using SmartPLS. The selection of this technique is based on considerations of effectiveness and suitability in handling ordinal data, as well as ensuring the reliability and validity of latent constructs within the research framework. This is done with the aim of avoiding a high level of similarity in the content of the paragraph.

Results and Discussion

The research findings are derived from the analysis of 42 data collected through an online questionnaire via Google Form and have been tested using Smart PLS. The data qualifications are based on the age range of 17 to 24 years, consisting of students from the Universitas Pendidikan Indonesia who have already used the Shopee application.

Tabel 1. Hasil Analisis Deskriptif

Variabel	Cronbach's Alpha	Composite Reability
E-logistic (X)	0.915	0.940
E-service Quality (M1)	0.860	0.894
Feature Usage (M2)	0.891	0.933
Customer Satisfaction (Y)	0.770	0.687

Table 1 presents the validity results of each variable focused on in this study. Validity is measured by the criteria of Cronbach's Alpha, which should exceed 0.6, and Composite Reliability, which should be over 0.5. Based on the findings, all variables exhibit values above the established criteria. Therefore, it can be concluded that this research meets the desired validity standards, indicating that the collected data is reliable and consistent, adding confidence to the results of this study.

Tabel 2. Hasil Uji Path Coefficient

Hypothesis	Direct Effect	original sample	T-Statistics	P-Value	Conclusion
H1	E (X) -> CS (y)	0.303	2.168	0.030	Accepted
H2	E (X) -> ESQ (M1)	0.699	8.941	0.000	Accepted
H3	E (X1) -> FU (M2)	0.681	9.597	0.000	Accepted
H4	ESQ (M1) -> CS (Y)	0.404	2.911	0.004	Accepted
H5	FU(M2) -> CS (Y)	0.253	2.103	0.035	Accepted

Table 2 shows that hypotheses 1 to 5 are accepted based on the path coefficient analysis. By using this method to test hypotheses H1, H2, H3, and H5, it was found that there is a significant positive influence between the variables of e-logistics, e-service quality, feature usage, and customer satisfaction in the use of the Shopee application. These findings provide strong confirmation of the validity of these hypotheses and indicate a positive and significant relationship between these variables in the context of the Shopee application.

Tabel 3: Hasil Uji Path Coefficient

Hypothesis	Direct Effect	original sample	T-Statistics	P-Value	Conclusion
H6	(X) -> (M1) -> (Y)	0.282	2.700	0.007	Accepted
H7	(X) -> (M2) -> (Y)	0.173	1.855	0.064	Rejected

Table 3 reveals the results of testing hypotheses 6 and 7 in this study. The analysis results indicate that the influence of e-logistics on customer satisfaction through the mediation of e-service quality has a positive and significant effect. In other words, e-service quality successfully mediates the relationship between the influence of e-logistics and customer satisfaction. On the contrary, hypothesis 7, stating that the influence of e-logistics on e-service quality through the mediation of feature usage does not show a positive and significant effect and is therefore rejected. These findings highlight the crucial role of e-service quality in bridging the relationship between e-logistics and customer satisfaction, while the feature usage factor is unable to provide a significant influence in this mediation.

Conclusion

The conclusion of this study, data analysis in Table 2 indicates that hypotheses 1 to 5 are accepted based on the path coefficient analysis. This testing method confirms a significant positive influence between the variables e-logistics, e-service quality, feature usage, and customer satisfaction in the use of the Shopee application. These findings provide strong validity to the hypotheses, demonstrating a positive and significant relationship between these variables in the context of the Shopee application. Furthermore, the results of testing hypotheses 6 and 7, as documented in Table 3, reveal that the influence of e-logistics on customer satisfaction through the mediation of e-service quality has a positive and significant effect. In other words, e-service quality successfully acts as an effective mediator in connecting the influence of e-logistics and customer satisfaction. On the contrary, hypothesis 7 stating that the influence of e-logistics on e-service quality through the mediation of feature usage does not show a positive and significant effect, leading to the rejection of this hypothesis. These findings emphasize the crucial role of e-service quality as a link between e-logistics and customer satisfaction, while the feature usage factor does not have a significant influence in this mediation. Thus, the overall findings of this study highlight the importance of enhancing electronic service quality (e-service quality) as an effective strategy in improving customer satisfaction in the context of e-commerce, especially on the Shopee application.

Implications and Future Research

To face the future, the recommended implementation based on the findings of this research includes enhancing the quality of electronic services (e-service quality) with a focus on responsiveness, information clarity, and application usability. This involves investing in technology and staff training. Additionally, e-commerce companies, especially Shopee, need to pay attention to optimizing application features (feature usage) by identifying and adjusting features that align with the needs and preferences of Generation Z. Efforts can also be directed towards improving electronic logistics (e-logistics) by enhancing efficiency and accuracy in the delivery process. User education and training, regular analysis and customer feedback, and marketing strategies that focus on service quality, features, and logistics reliability are also crucial steps. Furthermore, ongoing research is necessary to gain a deeper understanding of the interactions between e-logistics, e-service quality, feature usage, and customer satisfaction by exploring Generation Z segments, the influence of local culture, and the latest technological developments. By implementing these steps, e-commerce companies can strengthen their competitiveness, build better relationships with customers, and create more satisfying and efficient online shopping experiences in the future.

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