



Analyzing Electronic Service Quality in Shopee Using the E-Servqual Method

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Abstract

This study evaluates the electronic service quality of the Shopee e-commerce platform using the e-servqual framework. The increasing use of digital commerce platforms has intensified the need for electronic service quality evaluation. A quantitative descriptive approach was employed involving 100 active Shopee users selected through purposive sampling. Data were collected through an online questionnaire and analyzed using descriptive e-servqual gap analysis and cartesian diagram. The analysis examined the gaps between users' expectations and perceived service performance across seven dimensions: efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact. The findings indicate that all dimensions produced negative gap scores, suggesting that the platform's service performance has not fully met user expectations. The largest negative gap was identified in the responsiveness dimension (-0.984), followed by system availability (-0.828) and privacy (-0.820). Cartesian analysis revealed that several attributes related to system stability, customer service responsiveness, compensation procedures, and information clarity were positioned in Quadrant I, indicating high importance but relatively low performance. These findings highlight several service attributes that require managerial attention and improvement. The study contributes empirical insights into the application of the e-servqual approach in the Indonesian e-commerce context based on a limited user sample.

Keywords: *E-Commerce, E-Servqual, Gap Analysis, Cartesian Diagram, Customer Satisfaction*

INTRODUCTION

Rapid digital innovation has transformed the structure of commercial activities, especially by accelerating the growth of e-commerce markets. The internet has evolved from a mere communication tool into a strategic platform that enables firms to expand market reach, enhance operational efficiency, and implement more targeted and measurable marketing strategies. Consequently, companies are required to continuously innovate in order to sustain competitiveness within an increasingly dynamic and competitive environment.

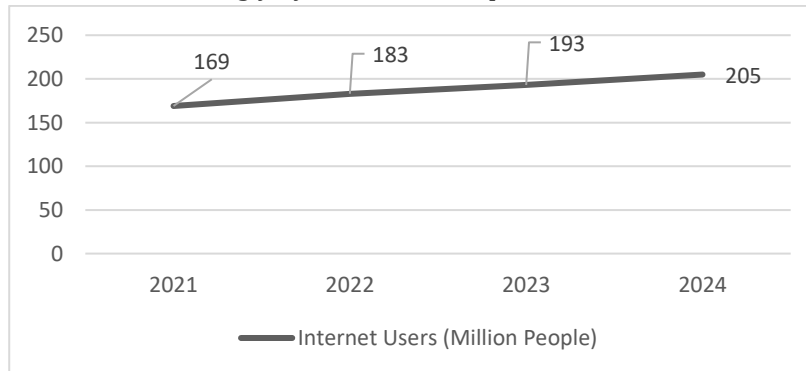


Figure 1. Projection of Internet Usage in Indonesia

Source: [BPS \(2025\)](#)

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Based on data from the Badan Pusat Statistik (BPS) obtained through the 2021 National Socioeconomic Survey (Susenas), as many as 169 million Indonesians were recorded as having accessed the internet. This high level of internet usage reflects an environment of information openness as well as public acceptance of technological advancements and social changes. In 2022, the number of internet users in Indonesia increased to 183 million people, representing an 8 percent rise compared to the previous year. This surge in internet users was closely related to the rapid development of mobile phone technology. Furthermore, in 2023, the number of internet users in Indonesia increased again to 193 million people, showing a growth of 5 percent. Meanwhile, in 2024, the figure reached 205 million people, with an increase of 6 percent compared to 2023.

Based on the data presented, it can be concluded that there has been a steady increase in the number of internet users in Indonesia from 2021 to 2024. This growth reflects the high level of digital technology adoption among Indonesian society, driven by openness to information and the rapid advancement of technology, particularly mobile phone technology. The increase in internet users from 169 million people in 2021 to 205 million people in 2024 demonstrates a positive trend in the national digital transformation, which has the potential to support progress in various sectors, including education, the economy, and government. This indicates that internet usage will continue to grow at a stable rate.

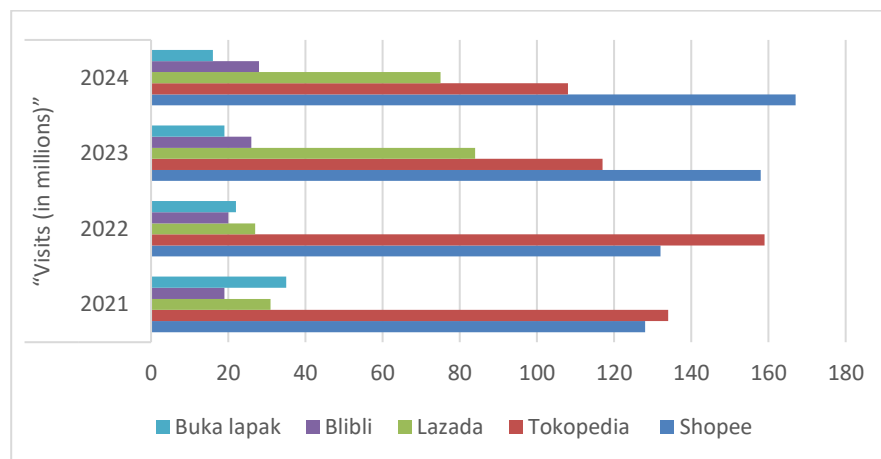


Figure 2. Frequently Accessed E-Commerce Platforms in Indonesia
Source: Goodstats (2021-2024)

Based on the marketplace visit graph for the 2021–2024 period, Shopee demonstrated the most consistent growth trend compared to other e-commerce platforms. In 2021, Shopee recorded approximately 128 million visits, which increased to around 133 million visits in 2022. Although Tokopedia temporarily ranked as the leading platform during that year, Shopee was still able to maintain a high level of traffic amid increasingly intense competition in the e-commerce market.

Furthermore, in 2023, Shopee experienced considerable growth, with the number of visits reaching approximately 158 million. This increase reflects the company's success in attracting and retaining users through various promotional programs, such as free shipping, cashback, live shopping, and the integration of digital payment services. This positive trend continued in 2024, when Shopee's visits further increased to approximately 167 million, positioning Shopee as the marketplace with the highest traffic compared to its competitors.

Overall, the data presented in the graph indicate that Shopee maintained stable and dominant growth performance throughout the research period. The year-to-year increase in visits suggests strong public interest in the Shopee platform as well as the effectiveness of the company's marketing strategies and service innovations in strengthening its position within Indonesia's e-

commerce industry. The marketplace traffic data were adapted from and related digital commerce statistics reports.

Table 3. Shopee User Complaints

Complaint Date	Shopee User Name	Complaint Description
May, 8 2025	Miftahul Anwar	Sorry, only 2 stars. Shopee is good and offers many discounts, but lately when I want to check out urgent items using Shopee Pay, the payment cannot be processed because the balance is said to be insufficient, even though my Shopee Pay balance is actually more than enough. The notification says that the item price exceeds the Shopee Pay balance. If the final price is indeed higher than the displayed price before checkout, then the detailed price, discount details, and total price shown beforehand become meaningless because the actual checkout price turns out to be different. Very disappointing.
June, 22 2025	Herni Larisa	Why can't I access my SPayLater account? Whenever I click on it, only a blank white screen appears, even though I want to pay my bill. I thought it was my phone at first, but when I tried opening it on another tab, it was still the same — just a white screen. Please provide a solution so I can pay my bill.
July, 3 2025	Wardana Febriaryo	Why does Shopee's product search now only display around 1-3 items, while the rest are just search recommendations? Shopping is becoming more and more boring because of this.

Source: Shopee App on Google Play Store (2025)

Although Shopee has been able to compete as one of the largest e-commerce platforms with a high number of users, there are still various consumer complaints related to the quality of services provided. These complaints include payment system disruptions, delivery delays, limitations in product search features, and unprofessional courier services. Such issues may affect customer satisfaction and trust in the platform.

According to [Parasuraman et al. \(2005\)](#), service quality is determined by the extent to which the services received meet consumer expectations. When services fail to meet expectations, customer dissatisfaction may arise and potentially influence customer loyalty. Therefore, Shopee needs to conduct comprehensive service evaluations and improvements, particularly in payment systems, delivery services, and service quality supervision.

The e-servqual framework developed by [Parasuraman et al. \(2005\)](#) has been widely applied in e-commerce studies to evaluate users' perceptions of electronic service quality. In e-commerce environments, service quality not only relates to product offerings but also includes transaction reliability, data security, platform usability, and customer support. Consequently, the e-servqual framework has become an important approach for assessing users' experiences while interacting with digital platforms.

In addition, [Kotler & Keller \(2016\)](#) explained that customer satisfaction in e-commerce contexts is associated with users' evaluations of whether platform services align with their

expectations and transaction experiences. Gap analysis is frequently applied in e-commerce service evaluation to identify discrepancies between users' expectations and perceived service performance, thereby enabling the identification of service attributes requiring improvement.

Previous studies have extensively discussed electronic service quality in e-commerce platforms using the e-servqual framework. Research conducted by [Mardhotillah & Wibawa \(2025\)](#) examined several e-servqual dimensions within the Shopee marketplace environment, including efficiency, responsiveness, fulfillment, privacy, and contact. The study highlighted the importance of electronic service quality in shaping users' online shopping experiences and perceptions of digital platform services.

However, several issues remain insufficiently explored in previous studies. Earlier research has not comprehensively evaluated all e-servqual dimensions, particularly system availability and compensation, within a multidimensional service quality assessment framework. In addition, the continuous development of Shopee's platform features, transaction systems, promotional mechanisms, and digital interaction services may contribute to changes in user expectations and perceived service experiences. Furthermore, limited studies have specifically applied descriptive e-servqual gap analysis combined with Cartesian diagram analysis to identify priority service attributes requiring improvement within the Bandung Shopee marketplace context. Therefore, further research remains necessary to provide updated descriptive evidence regarding electronic service quality gaps and priority service attributes based on users' perceptions of the Shopee platform.

To address this issue, this study adopts the e-servqual model constructed by [Parasuraman et al. \(2005\)](#), which evaluates electronic service quality across multiple dimensions, including efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact. This approach enables a comprehensive assessment of the differences between expected and perceived service quality.

Based on the aforementioned background, this study aims to identify priority service attributes for improvement and determine strategic priorities for service improvement. The researcher is interested in conducting a study entitled "Analyzing Electronic Service Quality in Shopee Using the E-Servqual Method."

Problem Formulation:

Referring to the background presented previously, the following research questions are proposed:

1. How do Shopee users perceive electronic service quality based on the e-servqual?
2. Which dimensions show the largest service gap?
3. Which attributes are prioritized for improvement based on the Cartesian diagram?

Research Objectives:

Based on the formulated research problems, this study focuses on identifying and evaluating the following aspects:

1. To evaluate users' perceptions of electronic service quality on the Shopee e-commerce platform based on the e-servqual dimensions.
2. To identify service attributes with the largest gaps between user expectations and perceived service performance on the Shopee platform.
3. To determine priority service attributes requiring improvement based on cartesian diagram.

LITERATURE REVIEW

Customer Satisfaction

Customer satisfaction reflects a psychological condition in which customers perceive that their needs and expectations have been fulfilled based on their initial expectations (Tjiptono, 2012). In the context of e-commerce, customer satisfaction is closely related to users' evaluations of transaction convenience, platform reliability, responsiveness, and overall online shopping experience. Previous research by Miao et al. (2022) explains that users tend to evaluate marketplace services not only from product quality, but also from the quality of electronic transaction processes, trust during online interactions, and the value perceived throughout the shopping experience. These findings indicate that customer satisfaction in digital marketplaces is associated with multiple aspects of electronic service experiences.

However, previous studies present varying perspectives regarding which dimensions of electronic service quality receive greater attention from users. Several studies emphasize efficiency and responsiveness as important aspects of online transactions, while other studies focus more on fulfillment, privacy, and system reliability in shaping user evaluations of marketplace services. In addition, the continuous development of marketplace features and digital transaction systems has led to changing user expectations toward e-commerce platforms. Consequently, maintaining consistent electronic service quality remains a challenge for digital marketplaces, particularly within highly competitive environments such as Shopee Indonesia.

Furthermore, previous studies have not consistently examined all dimensions of E-S-QUAL simultaneously in the Indonesian marketplace context, especially dimensions related to system availability and compensation. Therefore, further research is still needed to provide a more comprehensive evaluation of how Shopee users perceive electronic service quality. This study addresses the issue by analyzing electronic service quality in Shopee using the e-servqual method through dimensions including efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact in relation to customer satisfaction.

Electronic Service Quality

According to Zeithaml et al. (2002), electronic service quality is defined as the extent to which a website or digital platform facilitates efficient and effective shopping, delivery, and service processes. Similarly, research conducted by Lee and Lin (2005) describes e-service quality as the capability of online platforms to fulfill customer needs and expectations through dimensions such as efficiency, reliability, privacy, and responsiveness. This perspective emphasizes the importance of integrating technical aspects and user interaction in creating positive digital service experiences.

Although several dimensions proposed by Lee and Lin conceptually overlap with the e-servqual framework, particularly efficiency, privacy, and responsiveness, the present study does not directly integrate Lee and Lin's dimensions into the analytical model. Instead, their framework is used as supporting literature to strengthen the conceptual understanding of electronic service quality in online shopping environments. The primary analytical framework adopted in this study remains the e-servqual model developed by Parasuraman et al. (2005) because it provides a more comprehensive evaluation of electronic service quality through additional dimensions such as system availability, compensation, and contact, which are highly relevant within digital marketplace platforms.

Based on these perspectives, electronic service quality can be defined as the extent to which a digital platform is capable of delivering efficient, reliable, and secure online services to users. It encompasses not only the outcomes of digital interactions but also the service delivery process, including technical aspects such as system reliability, access speed, data security, and user interface usability. According to Parasuraman et al. (2005), E-S-QUAL consists of the following seven

dimensions:

1. Efficiency
The ability of users to access, navigate, and use a digital platform with ease and speed.
2. System Availability
The ability of the system to function reliably and consistently without technical failures such as errors, crashes, or downtime.
3. Fulfillment
The degree to which the service provider delivers on its promises, including product availability, order accuracy, and timely delivery.
4. Privacy
The level of protection provided for users' personal and financial information during online transactions.
5. Responsiveness
The capability of service providers to deliver timely and effective responses to customer inquiries, complaints, and service-related issues.
6. Compensation
The extent to which the provider offers appropriate compensation or remedies in response to service failures, delays, or errors.
7. Contact
The ease with which users can communicate directly with the service provider through various channels, such as live chat, call centers, or email.

The e-servqual framework is considered appropriate for evaluating electronic service quality within digital marketplace platforms because it was specifically developed to measure users' evaluations of online service experiences in electronic environments. Compared with traditional service quality models such as SERVQUAL, which primarily focus on face-to-face service interactions, e-SERVQUAL emphasizes dimensions closely associated with digital platform capabilities, including system availability, efficiency, privacy, and online responsiveness. Within e-commerce environments, these dimensions are closely related to users' experiences while accessing applications, conducting transactions, communicating with service providers, and evaluating the reliability of digital services.

Theoretically, each e-servqual dimension represents different aspects of electronic service experiences that may shape users' perceptions of platform quality. Efficiency is associated with ease of navigation and transaction convenience, while system availability reflects the reliability and technical stability of digital platforms. Fulfillment represents the consistency between promised and delivered services, whereas privacy relates to users' perceptions of transaction and personal data security. In addition, responsiveness, compensation, and contact describe how platforms manage customer communication and service recovery processes during online interactions. Therefore, the e-servqual framework provides a comprehensive approach for describing users' evaluations of electronic service quality within marketplace-based e-commerce platforms.

Research conducted by [Egala et al. \(2021\)](#) highlighted that users' perceptions of digital service quality are closely associated with their experiences while interacting with online service systems. The study emphasized that platform reliability, responsiveness, and transaction convenience remain important considerations in shaping users' evaluations of digital services. These findings indicate that electronic service quality involves both technological performance and users' service experiences throughout the transaction process, further highlighting that users' perceptions of digital service quality are closely associated with their experiences while interacting with online service systems. The study emphasized that platform reliability, responsiveness, and transaction convenience remain important considerations in shaping users' evaluations of digital

services. These findings indicate that electronic service quality involves both technological performance and users' service experiences throughout the transaction process.

Similarly, research conducted by [Isnoe and Azis \(2024\)](#) demonstrated that dimensions such as efficiency, fulfillment, privacy, responsiveness, compensation, and contact were considered by users in evaluating the service quality of digital platforms. The study further emphasized that system quality and electronic service interaction experiences constitute important aspects of users' evaluations of digital service experiences. These findings indicate that users' perceptions of electronic service quality are closely associated with both the technical capabilities of the platform and the quality of service interactions within digital applications.

Based on the theoretical explanation and findings from previous studies, the e-servqual framework can be considered a relevant and comprehensive approach for evaluating electronic service quality within digital marketplace platforms. The framework emphasizes various dimensions of online service experiences, including efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact, which collectively represent both the technological and interactional aspects of digital services. Previous studies have also shown that users' perceptions of electronic service quality are closely related to their experiences during transactions and interactions with digital platforms.

Theoretically, each E-S-QUAL dimension is expected to influence users' perceptions and satisfaction because each dimension represents a particular aspect of service performance directly experienced by users during online interactions. Efficiency is expected to influence satisfaction through ease of navigation, accessibility, and transaction convenience, which may reduce users' effort and time consumption. System availability is associated with the reliability and technical stability of the platform, where consistent system performance may enhance users' trust and confidence in the platform. Fulfillment is expected to influence satisfaction through the platform's ability to provide services and transactions in accordance with users' expectations and promised services. Privacy also plays an important role in shaping users' perceptions regarding transaction security and personal data protection, which are essential factors within digital environments.

Furthermore, responsiveness, compensation, and contact are closely associated with how digital platforms manage communication, complaint handling, and service recovery processes. Responsive customer support and appropriate compensation mechanisms may reduce users' dissatisfaction when service failures occur, while accessible contact channels may strengthen users' confidence in obtaining assistance when needed. Therefore, improvements across all E-S-QUAL dimensions are theoretically expected to enhance users' perceptions of electronic service quality and contribute positively to user satisfaction within digital marketplace platforms.

Gap Score (Service Quality Gap Model)

The perception–expectation gap approach proposed by [Parasuraman et al. \(2005\)](#) explains that the assessment of service quality is based on differences between expected and perceived service performance. Research presented by [Abdirad and Krishnan \(2021\)](#) focused on broader electronic supply chain and operational system perspectives rather than specifically examining multidimensional electronic service quality gaps from users' perceptions within marketplace-based e-commerce platforms. In addition, several studies discuss service quality conceptually without comprehensively identifying specific service attributes requiring priority evaluation based on users' expectation–perception comparisons. Therefore, this study is expected to provide a descriptive contribution regarding how users evaluate electronic service quality within digital marketplace platforms.

Cartesian Diagram

Table 4. Cartesian Diagram

<p>Quadrant I Concentrate Here <i>High Importance</i> <i>Low Performance</i></p>	<p>Quadrant II Keep Up the Good Work <i>High Importance</i> <i>High Performance</i></p>
<p>Quadrant III Low Priority <i>Low Importance</i> <i>Low Performance</i></p>	<p>Quadrant IV Possible Overkill <i>Low Importance</i> <i>High Performance</i></p>

Source: [Tjiptono \(2015\)](#)

Cartesian diagram is widely applied in service quality evaluation to classify service attributes based on users' perceptions of importance and perceived performance levels. This approach enables researchers to identify priority service attributes requiring immediate evaluation, attributes that should be maintained, as well as service aspects considered less critical within digital platform environments. In e-commerce and digital marketplace contexts, the Cartesian diagram is frequently used to provide a visual representation of service priorities based on users' evaluations of electronic service experiences.

Research conducted by [Nuraieni et al., \(2021\)](#) explained that IPA mapping through the Cartesian diagram categorizes service attributes into four quadrants based on combinations of importance and performance levels. Quadrant I as representing attributes with high importance but relatively low performance that require primary attention for improvement, while Quadrant II contains attributes with both high importance and satisfactory performance levels that should be maintained consistently. In addition, Quadrant III reflects attributes with lower importance and performance levels, whereas Quadrant IV represents attributes considered relatively excessive due to high performance despite lower perceived importance. The determination of quadrant boundaries in the cartesian diagram is conducted using the mean values of the performance and importance variables. The mean performance value is used as the vertical axis (X-axis), while the mean importance value is used as the horizontal axis (Y-axis). The intersection of these two lines divides the diagram into four quadrants. Each attribute is then mapped according to the position of its performance and importance values relative to the mean values to determine whether the attribute belongs to Quadrant I, II, III, or IV.

Similarly, research conducted by [Segonang et al. \(2021\)](#) applied the Cartesian diagram within electronic service quality evaluation using the e-servqual approach. The study highlighted that IPA assists researchers in identifying digital service attributes requiring immediate evaluation based on discrepancies between users' expectations and perceived service performance. Within digital service and marketplace environments, the approach is considered useful because it provides a visual representation of electronic service priorities from users' perspectives.

However, previous studies demonstrate variations in identifying service priorities due to differences in platform characteristics, transaction systems, and use expectations across digital service environments. In addition, several studies focus on specific digital service sectors without comprehensively examining electronic marketplace platforms with rapidly evolving features and transaction systems. Consequently, service attributes categorized as high priority in one platform environment may not necessarily reflect similar conditions in other digital marketplace contexts.

RESEARCH METHOD

A quantitative descriptive approach is utilized in this study to assess electronic service quality and user satisfaction on the Shopee e-commerce platform. This descriptive approach is employed to identify and describe the discrepancy between users' expectations and their perceived service experiences. The population examined in this study consists of Shopee users. In this study, active Shopee users refer to individuals who have used the Shopee application for at least five years. The minimum five-year usage criterion was applied because long-term users are considered to possess sufficient experience in utilizing various Shopee features and services, enabling them to provide more comprehensive evaluations regarding electronic service quality and users' service experiences. Due to research limitations, purposive sampling was employed in this study. The questionnaire was distributed online using Google Forms through social media platforms. At the beginning of the questionnaire, respondents were screened using questions related to the duration of Shopee usage to ensure their eligibility and suitability with the research criteria. This study involved 100 respondents as the research sample. The sample size was determined based on the statement of Fraenkel and Wallen, who explain that a minimum sample of approximately 100 respondents is considered adequate for descriptive research. Responses that did not meet the minimum Shopee usage criterion or contained incomplete questionnaire data were excluded from the analysis process.

The research instrument was adapted from the e-servqual model developed by A. Parasuraman et al. (2005), which consists of seven dimensions: efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact. Each dimension was measured using five statement items, resulting in a total of 35 items. The performance scale ranged from 1 (Strongly Unsatisfactory) to 5 (Strongly Satisfactory), while the expectation scale ranged from 1 (Strongly Unimportant) to 5 (Strongly Important). All questionnaire items were assessed in two forms of evaluation, namely perceived performance and users' expectations. The questionnaire items were originally adapted from the e-servqual instrument developed by Parasuraman et al. (2005). Several wording adjustments were made to ensure suitability with the Bandung Shopee marketplace context while maintaining the conceptual meaning of each construct. The questionnaire was translated into Indonesian to facilitate respondents' understanding. The translated version was then reviewed to ensure clarity, readability, and consistency with the original English version before data collection was conducted. A preliminary pilot test was conducted on several Shopee users to evaluate the clarity and readability of the questionnaire items before the main survey distribution. Prior to the main analysis, validity testing was conducted using Pearson Product Moment correlation analysis in SPSS to evaluate the relationship between each questionnaire item and the total construct score. Each item was considered valid when the correlation coefficient exceeded the minimum acceptable threshold and showed statistical significance at the 0.05 level. The validity testing results indicated that all questionnaire items met the required validity criteria and were suitable for further analysis. Reliability testing was conducted using Cronbach's Alpha coefficient in SPSS to evaluate the internal consistency of the questionnaire items within each e-servqual dimension. A Cronbach's Alpha value greater than 0.60 was considered acceptable, indicating that the instrument possessed satisfactory reliability and consistency. The reliability test results showed that all dimensions achieved Cronbach's Alpha values above the acceptable threshold.

The data used in this study consist of both primary and secondary data. Primary data were collected through an online questionnaire distributed via Google Forms, while secondary data were obtained from relevant literature, academic journals, and other supporting sources. Prior to completing the questionnaire, respondents were informed about the purpose of the study, and their participation was voluntary. The questionnaire was completed anonymously, and all collected data

were used solely for academic research purposes to maintain respondents' confidentiality and privacy.

Table 5. Operationalization of E-Servqual Dimensions

Research Variables	Sub Variables	Indicators	Measurement Scale	Adapted From
E-Service Quality (X)	Efficiency	-Ease of using the Shopee application. -Speed of access to the Shopee application. -Ease of finding menus and features. -Ease of product searching. -Clarity of product information.	Likert Scale 1-5	Parasuraman et al. (2005)
	System Availability	-Stability of the Shopee application during use. -Minimal system disruptions/errors in Shopee. -Smoothness of the transaction process. -Availability of the application without frequent server errors. -Consistency of application performance.	Likert Scale 1-5	Parasuraman et al. (2005)
	Fulfillment	-Conformity of the received product with the description on Shopee. -Timeliness of delivery. -Accuracy of delivery information. -Availability of stock according to the provided information. -Condition of the product upon receipt.	Likert Scale 1-5	Parasuraman et al. (2005)
	Privacy	-Security of Shopee users' personal data. -Protection of Shopee users' account information. -Security of the payment system. -Confidentiality of transaction data.	Likert Scale 1-5	Parasuraman et al. (2005)

Research Variables	Sub Variables	Indicators	Measurement Scale	Adapted From
		-Trust in the Shopee system.		
	Responsiveness	-Speed of Shopee customer responses. -Ease of submitting complaints. -Clarity of information provided by customer service. -Accuracy of the solutions provided. -Willingness to assist customers.	Likert Scale 1-5	Parasuraman et al. (2005)
	Compensation	-Clarity of Shopee's refund policy. -Ease of the refund/return process. -Speed of the refund process. -Suitability of compensation with the problem encountered. -Satisfaction with the compensation policy.	Likert Scale 1-5	Parasuraman et al. (2005)
	Contact	-Ease of contacting Shopee customer service. -Availability of various communication channels (chat, help center). -Speed of access to customer service. -Professionalism of customer service. -Courtesy and service attitude.	Likert Scale 1-5	Parasuraman et al. (2005)

Source: [Parasuraman et al. \(2005\)](#)

The analysis process was conducted using the e-servqual method through a perception-expectation gap analysis approach, by calculating the difference between users' perceptions and expectations for each service attribute. The gap values were used to assess service quality, where positive values indicate that performance exceeds expectations, zero indicates that performance meets expectations, and negative values indicate that performance falls below expectations. Furthermore, the analysis was complemented by the use of a cartesian diagram to map service attributes into four quadrants based on their average perception and expectation scores. The X-axis represents the mean performance (perception) score, while the Y-axis represents the mean

importance (expectation) score. The intersection point of the axes was determined using the overall average values of perception and expectation. Attributes with perception and expectation scores above the overall average values were categorized as high, while scores below the overall averages were categorized as low. This categorization was used as the basis for quadrant mapping in the cartesian diagram. Each service attribute was plotted according to its coordinates to identify priority areas for improvement and maintain service performance. This mapping was used to identify service attributes requiring improvement priorities based on users evaluations.

FINDINGS AND DISCUSSION

Respondent Profile

Table 6. Respondents' Demographics Characteristics

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	36	36%
	Female	64	64%
Age	<20 Years	1	1%
	20-25 Years	25	25%
	26-30 Years	48	48%
	31-35 Years	16	16%
	35-40 Years	7	7%
	>40 Years	3	3%
Education	High School	13	13%
	Diploma	12	12%
	Bachelor's Degree	64	64%
	Master's Degree	11	11%
	Doctoral Degree	-	-
Occupation	Student	4	4%
	Government Employee	10	10%
	Private Employee	59	59%
	Entrepreneur	15	15%
	Housewife	8	8%
	State-Owned Enterprise Employee	2	2%
	Freelancer	1	1%
	Staff	1	1%
Income	<IDR2.000.000	9	9%
	IDR2.000.000-IDR3.999.999	14	14%
	IDR4.000.000-IDR5.999.999	41	41%
	IDR6.000.000-IDR7.999.999	22	22%
	>IDR8.000.000	14	14%

Source: Processed questionnaire (2026).

The respondent profile indicates that female users constitute the largest proportion of participants accounting for 64 percent, with male respondents representing 36 percent of the participants. In terms of age distribution, the dominant respondent group is individuals aged 26–30 years category at 48 percent, followed by the 20–25 years category at 25 percent, indicating that the sample is predominantly composed of young adults.

In terms of educational attainment, the majority of participants hold undergraduate qualifications at 64 percent, followed by master's degree holders at 11 percent, reflecting a relatively well-educated user base. In terms of occupation, most respondents are private employees, accounting for 59 percent, followed by entrepreneurs and government employees.

Furthermore, the income distribution shows that the largest proportion of respondents earn between IDR 4,000,000 and 5,999,999 per month, representing 41 percent of the sample, indicating a middle-income user segment.

In addition, respondents reported purchasing various types of products through the platform, including digital products, food and beverages, beauty and personal care items, household necessities, electronics, and fashion and accessories. This diversity reflects the broad utilization of the platform across different product categories.

Validity Result

The validity test employed the Pearson Product-Moment correlation technique, analysis involving 100 respondents, 75 statements at a significance level of 5%. The validity assessment aimed to evaluate the extent to which each questionnaire item was capable of accurately measuring the intended research constructs. The analysis results indicate that the correlation coefficient obtained for each questionnaire item was higher than the critical r-table value of 0.195, indicating that each item demonstrated an adequate correlation with the total score and met the required item validity criteria.

Table 7. Validity Test of Shopee Service Performance

Dimensions	Number of Items	Critical r-table	Calculated r-value	Sig.	Decision
Efficiency	Ease of use of the Shopee application.	0.195	0,544	0.000	VALID
	Speed of access to the Shopee application.	0.195	0,631	0.000	VALID
	Ease of finding menus and features.	0.195	0,797	0.000	VALID
	Ease of product searching.	0.195	0,677	0.000	VALID
	Clarity of product information.	0.195	0,762	0.000	VALID
System Availability	Stability of the Shopee application during use.	0.195	0,761	0.000	VALID
	Minimal system disruptions/errors in Shopee.	0.195	0,794	0.000	VALID
	Smoothness of the transaction process.	0.195	0,683	0.000	VALID
	Availability of the application without frequent server errors.	0.195	0,762	0.000	VALID
	Consistency of application performance.	0.195	0,643	0.000	VALID

Dimensions	Number of Items	Critical r-table	Calculated r-value	Sig.	Decision
Fulfillment	Conformity of the received product with the description on Shopee.	0.195	0,683	0.000	VALID
	Timeliness of delivery.	0.195	0,675	0.000	VALID
	Accuracy of delivery information.	0.195	0,601	0.000	VALID
	Availability of stock according to the provided information.	0.195	0,590	0.000	VALID
	Condition of the product upon receipt.	0.195	0,656	0.000	VALID
Privacy	Security of Shopee users' personal data.	0.195	0,799	0.000	VALID
	Protection of Shopee users' account information.	0.195	0,712	0.000	VALID
	Security of the payment system.	0.195	0,532	0.000	VALID
	Confidentiality of transaction data.	0.195	0,733	0.000	VALID
	Trust in the Shopee system	0.195	0,813	0.000	VALID
Responsiveness	Speed of Shopee customer service responses.	0.195	0,749	0.000	VALID
	Ease of submitting complaints.	0.195	0,730	0.000	VALID
	Clarity of information provided by customer service	0.195	0,843	0.000	VALID
	Accuracy of the solutions provided.	0.195	0,829	0.000	VALID
	Willingness to assist customers.	0.195	0,830	0.000	VALID
Compensation	Clarity of Shopee's refund policy.	0.195	0,648	0.000	VALID
	Ease of the refund/return process.	0.195	0,708	0.000	VALID
	Speed of the refund process.	0.195	0,766	0.000	VALID
	Suitability of compensation for the problem encountered.	0.195	0,797	0.000	VALID
	Satisfaction with the compensation policy.	0.195	0,793	0.000	VALID
Contact	Ease of contacting Shopee customer service.	0.195	0,833	0.000	VALID
	Availability of various communication channels (chat, help center).	0.195	0,796	0.000	VALID

Dimensions	Number of Items	Critical r-table	Calculated r-value	Sig.	Decision
	Speed of access to customer service.	0.195	0,861	0.000	VALID
	Professionalism of customer service.	0.195	0,773	0.000	VALID
	Courtesy and service attitude.	0.195	0,840	0.000	VALID

Source: Processed questionnaire (2026).

Table 8. Validity Test of Shopee Service Expectations

Dimensions	Number of Items	Critical r-table	Calculated r-value	Sig.	Decision
Efficiency	I expect the Shopee application to be easy to use.	0.195	0,909	0.000	VALID
	I expect the Shopee application to have fast access speed.	0.195	0,900	0.000	VALID
	I expect the menus and features in Shopee to be easy to find.	0.195	0,856	0.000	VALID
	I expect product searching in Shopee to be easy to perform.	0.195	0,960	0.000	VALID
	I expect product information in Shopee to be presented clearly.	0.195	0,917	0.000	VALID
System Availability	I expect the Shopee application to remain stable during use.	0.195	0,856	0.000	VALID
	I expect Shopee to have minimal system disruptions/errors.	0.195	0,925	0.000	VALID
	I expect the transaction process in Shopee to run smoothly.	0.195	0,884	0.000	VALID
	I expect the Shopee application to be available without frequent server errors.	0.195	0,876	0.000	VALID
	I expect the performance of the Shopee application to remain consistent at all times.	0.195	0,915	0.000	VALID
Fulfillment	I expect the product received to match the description on Shopee.	0.195	0,891	0.000	VALID
	I expect product delivery to be carried out on time.	0.195	0,868	0.000	VALID
	I expect the delivery information provided by Shopee to be accurate.	0.195	0,919	0.000	VALID
	I expect product stock availability to match the information displayed.	0.195	0,944	0.000	VALID

Dimensions	Number of Items	Critical r-table	Calculated r-value	Sig.	Decision
	I expect the product to arrive in good condition.	0.195	0,833	0.000	VALID
Privacy	I expect Shopee users' personal data to be securely protected.	0.195	0,906	0.000	VALID
	I expect Shopee users' account information to be well-protected.	0.195	0,877	0.000	VALID
	I expect the payment system in Shopee to be secure to use.	0.195	0,810	0.000	VALID
	I expect transaction data to be kept confidential by Shopee.	0.195	0,941	0.000	VALID
	I expect the Shopee system to be trustworthy in protecting users' security.	0.195	0,911	0.000	VALID
	Responsiveness	I expect Shopee customer service to respond quickly.	0.195	0,820	0.000
I expect the complaint submission process in Shopee to be easy.		0.195	0,886	0.000	VALID
I expect the information provided by customer service to be clear.		0.195	0,902	0.000	VALID
I expect the solutions provided by customer service to be accurate.		0.195	0,895	0.000	VALID
I expect Shopee customer service to be willing to assist customers properly.		0.195	0,885	0.000	VALID
Compensation	I expect Shopee's refund policy to be clearly explained.	0.195	0,903	0.000	VALID
	I expect the refund/return process to be easy to carry out.	0.195	0,890	0.000	VALID
	I expect the refund process to be completed quickly.	0.195	0,881	0.000	VALID
	I expect the compensation provided to match the problem encountered.	0.195	0,937	0.000	VALID
	I expect Shopee's compensation policy to satisfy customers.	0.195	0,833	0.000	VALID
Contact	I expect Shopee's customer service to be easy to contact.	0.195	0,929	0.000	VALID
	I expect Shopee to provide various communication channels (chat, help center, etc.).	0.195	0,922	0.000	VALID

Dimensions	Number of Items	Critical r-table	Calculated r-value	Sig.	Decision
	I expect quick access to Shopee customer service.	0.195	0,861	0.000	VALID
	I expect Shopee's customer service to work professionally.	0.195	0,956	0.000	VALID
	I expect Shopee's customer service to serve customers politely and courteously.	0.195	0,934	0.000	VALID

Source: Processed questionnaire (2026).

These results indicate that all questionnaire items met the required item validity criteria and were considered appropriate for measuring the dimensions examined in this study. Consequently, all measurement indicators were considered valid and suitable for further analysis. The satisfactory validity results also indicate that the research instrument has a strong capability to capture respondents' perceptions and expectations regarding electronic service quality and user satisfaction within the Shopee e-commerce platform.

Reliability Result

Imam [Ghozali \(2012\)](#) states that reliability testing is used to determine the consistency of a questionnaire in measuring a variable. A research instrument is regarded as reliable if respondents' responses remain stable and consistent across different periods of measurement.

Table 9. Performance Reliability Test

Dimensions	Cronbach's Alpha	N of Items	Description
Efficiency	0,710	5	Reliable
System Availability	0,780	5	Reliable
Fulfillment	0,635	5	Reliable
Privacy	0,772	5	Reliable
Responsiveness	0,856	5	Reliable
Compensation	0,798	5	Reliable
Contact	0,878	5	Reliable

Source: Processed questionnaire, 2026

Based on the performance reliability test results, all e-servqual dimensions obtained Cronbach's Alpha values above the minimum reliability threshold of 0.60 proposed by Imam [Ghozali \(2012\)](#). Cronbach's Alpha values indicate the level of internal consistency among items within each dimension, meaning that higher alpha values reflect greater consistency of the items in measuring the same construct. Therefore, all questionnaire items used in this study can be considered reliable and appropriate for measuring users' perceptions and expectations regarding electronic service quality.

The efficiency dimension obtained a Cronbach's Alpha value of 0.710, indicating that the questionnaire items measuring ease of use and information accessibility possess good internal consistency. The system availability dimension produced a reliability coefficient of 0.780, suggesting that the items related to system stability and operational reliability are measured consistently. Furthermore, the fulfillment dimension generated a Cronbach's Alpha value of 0.635, which exceeds the minimum reliability criterion and indicates acceptable reliability, although its internal consistency is relatively lower compared to other dimensions. The privacy dimension

achieved a reliability value of 0.772, reflecting consistent measurement regarding data security and confidentiality aspects. The responsiveness dimension showed a high reliability coefficient of 0.856, indicating very strong consistency among items measuring customer service responsiveness and complaint handling. Similarly, the compensation dimension obtained a Cronbach's Alpha value of 0.798, demonstrating reliable measurement of compensation and refund-related service attributes. The highest reliability coefficient was found in the contact dimension with a value of 0.878, indicating very strong internal consistency among items related to communication accessibility with customer service.

Overall, these findings indicate that all questionnaire dimensions possess good internal consistency and are suitable for further analysis within the E-Servqual framework.

Table 10. Expectation Reliability Test

Dimensions	Cronbach's Alpha	N of Items	Description
Efficiency	0,945	5	Reliable
System Availability	0,934	5	Reliable
Fulfillment	0,934	5	Reliable
Privacy	0,933	5	Reliable
Responsiveness	0,923	5	Reliable
Compensation	0,931	5	Reliable
Contact	0,953	5	Reliable

Source: Processed questionnaire (2026)

Based on the expectation reliability test results, all E-Servqual dimensions obtained Cronbach's Alpha values above the minimum reliability threshold of 0.60 proposed by Imam Ghozali (2012). Cronbach's Alpha values indicate the level of internal consistency among questionnaire items within each dimension, meaning that higher alpha values reflect stronger consistency of the items in measuring the same construct. Therefore, all expectation measurement items used in this study can be considered highly reliable.

The efficiency dimension obtained a Cronbach's Alpha value of 0.945, indicating very strong internal consistency among items measuring users' expectations regarding ease of use and information accessibility. The system availability and fulfillment dimensions each produced reliability coefficients of 0.934, demonstrating highly consistent measurement of users' expectations related to system stability and service fulfillment. Furthermore, the privacy dimension achieved a Cronbach's Alpha value of 0.933, indicating very strong consistency in measuring expectations regarding data security and confidentiality. The responsiveness dimension obtained a reliability coefficient of 0.923, reflecting highly consistent measurement of customer service responsiveness expectations. Similarly, the compensation dimension generated a Cronbach's Alpha value of 0.931, demonstrating strong consistency among items related to compensation and refund expectations. The highest reliability coefficient was found in the contact dimension with a value of 0.953, indicating extremely strong internal consistency among items measuring users' expectations regarding communication accessibility with customer service.

Overall, these findings indicate that all expectation questionnaire dimensions possess very high internal consistency and are suitable for further analysis within the e-servqual framework.

E-Servqual Analysis

The analysis results using the e-servqual method indicate that all service quality dimensions exhibit negative gap values.

Table 11. User Needs Gap Analysis

No	List of Statement	GAP		GAP Value
		Performance	Expectations	
Efficiency				
1.	Ease of using the Shopee application.	4,35	4,81	-0,46
2.	Speed of access to the Shopee application.	4,29	4,85	-0,56
3.	Ease of finding menus and features.	4,23	4,87	-0,64
4.	Ease of product searching.	4,41	4,84	-0,43
5.	Clarity of product information.	4,17	4,86	-0,69
	Mean	4,29	4,846	-0,927
System Availability				
1.	Stability of the Shopee application during use.	3,78	4,81	-1,03
2.	Minimal system disruptions/errors in Shopee.	3,89	4,80	-0,91
3.	Smoothness of the transaction process.	4,19	4,86	-0,67
4.	Availability of the application without frequent server errors.	3,88	4,82	-0,94
5.	Consistency of application performance.	4,21	4,80	-0,59
	Mean	3,99	4,818	0,828
Fulfillment				
1.	Conformity of the received product with the description on Shopee.	4,04	4,84	-0,8
2.	Timeliness of delivery.	4,15	4,85	-0,7
3.	Accuracy of delivery information.	4,09	4,84	-0,75
4.	Availability of stock according to the provided information.	3,88	4,88	-1
5.	Condition of the product upon receipt.	4,06	4,88	-0,82
	Mean	4,044	4,858	0,814
Privacy				
1.	Security of Shopee users'	3,95	4,82	-0,87

personal data.				
2.	Protection of Shopee users' account information.	4,08	4,84	-0,76
3.	Security of the payment system.	4,10	4,89	-0,79
4.	Confidentiality of transaction data.	4,06	4,86	-0,8
5.	Trust in the Shopee system	3,99	4,87	-0,88
	Mean	4,036	4,856	-0,82
Responsiveness				
1.	Speed of Shopee customer service responses.	3,87	4,83	-0,96
2.	Ease of submitting complaints.	3,99	4,82	-0,83
3.	Clarity of information provided by customer service	3,85	4,86	-1,01
4.	Accuracy of the solutions provided.	3,82	4,88	-1,06
5.	Willingness to assist customers.	3,78	4,84	-1,06
	Mean	3,862	4,846	-0,984
Compensation				
1.	Clarity of Shopee's refund policy.	4,24	4,88	-0,64
2.	Ease of the refund/return process.	4,15	4,89	-0,74
3.	Speed of the refund process.	4,02	4,84	-0,82
4.	Suitability of compensation with the problem encountered.	3,98	4,89	-0,91
5.	Satisfaction with the compensation policy.	4,02	4,88	-0,86
	Mean	4,082	4,876	-0,794
Contact				
1.	Ease of contacting Shopee customer service.	4,01	4,84	-0,83
2.	Availability of various communication channels (chat, help center).	4,10	4,84	-0,74
3.	Speed of access to customer service.	3,96	4,81	-0,85
4.	Professionalism of customer service.	3,97	4,82	-0,85

5.	Courtesy and service attitude.	4,02	4,84	-0,82
	Mean	4,012	4,83	-0,818

Source: Processed questionnaire (2026)

Table 12. Service Quality by Dimension

No	Dimensions	Performance (P)	Expectation (E)	GAP	$Q = \frac{P}{E}$
1.	Efficiency	4,29	4,846	-0,556	0,885266199
2.	System Availability	3,99	4,818	-0,828	0,828144458
3.	Fulfillment	4,044	4,858	-0,814	0,832441334
4.	Privacy	4,036	4,856	-0,82	0,831136738
5.	Responsiveness	3,862	4,846	-0,984	0,796945935
6.	Compensation	4,082	4,876	-0,794	0,837161608
7.	Contact	4,012	4,83	-0,818	0,830641822

Source: Processed questionnaire (2026)

Overall, the service quality provided by Shopee is perceived as relatively good, as reflected in the high average performance scores obtained from the questionnaire results. However, user expectations regarding service quality are also at a high level, resulting in a gap between perceived performance and expectations. This condition suggests that Shopee still needs to improve its service quality to better meet user expectations and needs more effectively.

Cartesian Diagram

Table 13. Mean Score Cartesian Threshold

Axis	Mean Score
Performance (X)	4,045
Expectation (Y)	4,847

Source: Processed questionnaire (2026).

Table 14. Quadrant Allocation of Each Dimension

Dimensions	Number of Items	Threshold (X, Y)	Coordinat (X, Y)	Quadrant	Interpretation
Efficiency	Ease of use of the Shopee application.	(4,045), (4,847)	(4,35), (4,81)	IV	Low Importance, High Performance
	Speed of access to the Shopee application.	(4,045), (4,847)	(4,29), (4,85)	IV	Low Importance, High Performance
	Ease of finding menus and features.	(4,045), (4,847)	(4,23), (4,87)	I	High Importance, Low Performance
	Ease of product searching.	(4,045), (4,847)	(4,41), (4,84)	IV	Low Importance,

Dimensions	Number of Items	Threshold (X, Y)	Coordinat (X, Y)	Quadrant	Interpretation
					High Performance
	Clarity of product information.	(4,045), (4,847)	(4,17), (4,86)	I	High Importance, Low Performance
System Availability	Stability of the Shopee application during use.	(4,045), (4,847)	(3,78), (4,81)	III	Low Importance, Low Performance
	Minimal system disruptions/errors in Shopee.	(4,045), (4,847)	(3,89), (4,80)	III	Low Importance, Low Performance
	Smoothness of the transaction process.	(4,045), (4,847)	(4,19), (4,86)	II	High Importance, High Performance
	Availability of the application without frequent server errors.	(4,045), (4,847)	(3,88), (4,82)	I	High Importance, Low Performance
	Consistency of application performance.	(4,045), (4,847)	(4,21), (4,80)	IV	Low Importance, High Performance
Fulfillment	Conformity of the received product with the description on Shopee.	(4,045), (4,847)	(4,04), (4,84)	III	Low Importance, Low Performance
	Timeliness of delivery.	(4,045), (4,847)	(4,15), (4,85)	IV	Low Importance, High Performance
	Accuracy of delivery information.	(4,045), (4,847)	(4,09), (4,84)	IV	Low Importance, High Performance
	Availability of stock according to the provided information.	(4,045), (4,847)	(3,88), (4,88)	I	High Importance, Low Performance

Dimensions	Number of Items	Threshold (X, Y)	Coordinat (X, Y)	Quadrant	Interpretation
	Condition of the product upon receipt.	(4,045), (4,847)	(4,06), (4,88)	II	High Importance, High Performance
Privacy	Security of Shopee users' personal data.	(4,045), (4,847)	(3,95), (4,82)	I	High Importance, Low Performance
	Protection of Shopee users' account information.	(4,045), (4,847)	(4,08), (4,84)	IV	Low Importance, High Performance
	Security of the payment system.	(4,045), (4,847)	(4,10), (4,89)	II	High Importance, High Performance
	Confidentiality of transaction data.	(4,045), (4,847)	(4,06), (4,86)	II	High Importance, High Performance
	Trust in the Shopee system	(4,045), (4,847)	(3,99), (4,87)	I	High Importance, Low Performance
Responsiveness	Speed of Shopee customer service responses.	(4,045), (4,847)	(3,87), (4,83)	IV	Low Importance, High Performance
	Ease of submitting complaints.	(4,045), (4,847)	(3,99), (4,82)	IV	Low Importance, High Performance
	Clarity of information provided by customer service	(4,045), (4,847)	(3,85), (4,86)	I	High Importance, Low Performance
	Accuracy of the solutions provided.	(4,045), (4,847)	(3,82), (4,88)	I	High Importance, Low Performance
	Willingness to assist customers.	(4,045), (4,847)	(3,78), (4,84)	III	Low Importance, Low Performance

Dimensions	Number of Items	Threshold (X, Y)	Coordinat (X, Y)	Quadrant	Interpretation
Compensation	Clarity of Shopee's refund policy.	(4,045), (4,847)	(4,24), (4,88)	IV	Low Importance, High Performance
	Ease of the refund/return process.	(4,045), (4,847)	(4,15), (4,89)	II	Low Importance, High Performance
	Speed of the refund process.	(4,045), (4,847)	(4,02), (4,84)	III	Low Importance, Low Performance
	Suitability of compensation with the problem encountered.	(4,045), (4,847)	(3,98), (4,89)	I	High Importance, Low Performance
	Satisfaction with the compensation policy.	(4,045), (4,847)	(4,02), (4,88)	IV	Low Importance, High Performance
Contact	Ease of contacting Shopee customer service.	(4,045), (4,847)	(4,01), (4,84)	II	High Importance, High Performance
	Availability of various communication channels (chat, help center).	(4,045), (4,847)	(4,10), (4,84)	II	High Importance, High Performance
	Speed of access to customer service.	(4,045), (4,847)	(3,96), (4,81)	III	Low Importance, Low Performance
	Professionalism of customer service.	(4,045), (4,847)	(3,97), (4,82)	III	Low Importance, Low Performance
	Courtesy and service attitude.	(4,045), (4,847)	(4,02), (4,84)	II	High Importance, High Performance

Source: Processed questionnaire (2026).

Efficiency Dimension

The analysis results indicate a mean performance score of 4.29 and a mean expectation score of 4.846. Based on the Cartesian mapping, ease of finding menus and features and clarity of

product information are positioned in Quadrant I (Concentrate Here), indicating high importance but relatively low performance. This finding reflects a considerable gap between user expectations and actual service performance, suggesting that improvements in menu clarity, application features, and product information should become strategic priorities due to the considerable gap between users' expectations and perceived service performance.

No attributes were identified in Quadrant II (Keep Up the Good Work), indicating that no efficiency-related attributes have yet achieved both high importance and optimal performance simultaneously. Likewise, no attributes were categorized into Quadrant III (Low Priority), suggesting that all efficiency attributes are considered important by users.

Meanwhile, ease of use of the Shopee application, speed of access to the Shopee application, and ease of product searching are positioned in Quadrant IV (Possible Overkill), indicating relatively high performance despite lower importance levels. This condition may reflect inefficient resource allocation, suggesting the need to redirect organizational focus toward attributes in Quadrant I. Overall, the findings emphasize that improving efficiency-related aspects is essential to enhancing user experience and customer satisfaction.

These findings are consistent with the e-servqual theory proposed by [Parasuraman et al. \(2005\)](#), which emphasizes efficiency as an important determinant of users' online shopping experiences. Efficient navigation, accessibility of information, and ease of transaction processes play an important role in shaping users' perceptions of electronic service quality. The results also support previous e-commerce studies indicating that users tend to prioritize platforms that provide simple and user-friendly interfaces. In relation to the research objectives, the findings suggest that several efficiency-related attributes still require improvement to reduce the discrepancy between users' expectations and perceived service performance on the Shopee platform.

System Availability Dimension

The system availability dimension obtained a mean performance score of 3.99 and a mean expectation score of 4.818, indicating that users place high importance on system reliability and availability. The Cartesian analysis shows that the availability of the application without frequent server errors, related to application stability during peak usage periods, is located in Quadrant I (Concentrate Here). This finding highlights a critical gap between expectations and actual system performance, indicating that system stability remains a strategic issue requiring immediate improvement.

Smoothness of the transaction process, associated with transaction process reliability, falls within Quadrant II (Keep Up the Good Work), indicating that the platform has successfully met user expectations in ensuring smooth transactions. In contrast, stability of the Shopee application during use and minimal system disruptions/errors in Shopee are categorized into Quadrant III (Low Priority), suggesting relatively lower strategic importance. Meanwhile, consistency of application performance is positioned in Quadrant IV (Possible Overkill), reflecting high performance despite lower perceived importance. This condition suggests the potential need for reallocating resources toward more critical service attributes, particularly those associated with users' evaluations of system reliability and service convenience.

The findings regarding system availability support the e-servqual framework developed by [Parasuraman et al. \(2005\)](#), which identifies system reliability and operational stability as essential components of electronic service quality. Stable application performance is important in maintaining users' trust and transaction convenience within e-commerce platforms. These results are also consistent with previous studies emphasizing that technical disruptions and application instability may negatively influence users' service experiences. In the context of this study, the identified service gaps indicate that Shopee still needs to improve several aspects related to system

performance and operational consistency to better satisfy users' expectations.

Fulfillment Dimension

The fulfillment dimension recorded a mean performance score of 4.044 and a mean expectation score of 4.858, indicating that users place substantial importance on service reliability, delivery accuracy, and product conformity. The Cartesian analysis identified availability of stock according to the provided information, related to stock availability consistency, in Quadrant I (Concentrate Here). This attribute also exhibited the highest gap value of -1.00, reflecting a critical discrepancy between user expectations and actual performance. The finding suggests that inaccurate stock information remains a major issue that may undermine user trust and purchasing decisions.

Condition of the product upon receipt, associated with the condition of received products, was positioned in Quadrant II (Keep Up the Good Work), indicating that product quality has successfully met user expectations and should be consistently maintained. Meanwhile, conformity of the received product with the description on Shopee fell into Quadrant III (Low Priority), suggesting relatively lower strategic urgency. In contrast, timeliness of delivery and accuracy of delivery information were categorized into Quadrant IV (Possible Overkill), demonstrating high performance despite relatively lower importance. Notably, Ful 2, related to delivery timeliness, showed the lowest gap value of -0.70, indicating that this attribute most closely met user expectations. These findings imply that strategic resource allocation should prioritize attributes demonstrating larger perception expectation gaps, particularly those positioned in Quadrant I.

These findings are aligned with the e-servqual theory, which explains that fulfillment reflects the extent to which online platforms successfully deliver products and services according to users' expectations and promised information. The results are consistent with previous studies showing that delivery accuracy, product conformity, and timely order fulfillment remain critical factors influencing customer satisfaction in e-commerce environments. In relation to the research objectives, the findings indicate that several fulfillment-related attributes should become priorities for service quality improvement within the Shopee marketplace platform.

Privacy Dimension

The privacy dimension achieved a mean performance score of 4.036 and a mean expectation score of 4.856, reflecting the critical role of data security and privacy protection in shaping user trust and satisfaction. The analysis revealed that trust in the Shopee system, concerning the reliability of Shopee's security system in protecting user data and privacy, was positioned in Quadrant I (Concentrate Here). This attribute also recorded the highest gap value of -0.88, indicating a substantial mismatch between user expectations and perceived performance.

Two attributes, namely security of the payment system and confidentiality of transaction data, were classified into Quadrant II (Keep Up the Good Work), suggesting that these aspects have successfully met user expectations and represent key strengths of the platform's service quality. Meanwhile, the security of Shopee users' personal data was categorized into Quadrant III (Low Priority), indicating relatively lower strategic importance despite remaining relevant to users.

Furthermore, protection of Shopee users' account information, related to account information protection from misuse, was positioned in Quadrant IV (Possible Overkill). This finding indicates that the platform has demonstrated strong performance in account security. However, given its comparatively lower perceived importance, additional resource allocation toward this attribute may not provide substantial strategic value relative to higher-priority issues.

The findings support the e-servqual framework proposed by [Parasuraman et al. \(2005\)](#), which highlights privacy and data security as fundamental aspects of electronic service quality.

Users tend to place high importance on the protection of personal information and transaction security when conducting online shopping activities. These findings are also consistent with previous e-commerce research indicating that concerns regarding data privacy and account security may influence users' trust and long-term platform usage. Therefore, maintaining strong privacy protection mechanisms remains important for improving user confidence and satisfaction within the Shopee platform.

Responsiveness Dimension

The responsiveness dimension recorded a mean performance score of 3.862 and a mean expectation score of 4.846, indicating that users place substantial importance on customer service responsiveness. The Cartesian analysis identified clarity of information provided by customer service and accuracy of the solutions provided. in Quadrant I (Concentrate Here). These attributes relate to the clarity of explanations provided by customer service and the appropriateness of solutions offered to users. Despite their high importance, both attributes demonstrated below-average performance, reflecting a considerable service gap. Notably, Res 4 recorded the highest gap value of -1.06, suggesting that problem resolution remains the most critical weakness within this dimension. These findings highlight the urgent need to improve response quality, solution accuracy, and customer service competence.

No attributes were positioned in Quadrant II (Keep Up the Good Work), indicating that no responsiveness-related aspect has yet achieved both high importance and strong performance simultaneously. This finding suggests that the platform's responsiveness remains below user expectations overall.

Meanwhile, willingness to assist customers was categorized into Quadrant III (Low Priority), while speed of Shopee customer service responses and ease of submitting complaints fell into Quadrant IV (Possible Overkill). Res 2, associated with the ease of submitting complaints, showed the lowest gap value of -0.83, indicating that this aspect most closely aligns with user expectations. Strategically, the company should maintain current performance levels while prioritizing improvements on attributes located in Quadrant I.

These findings are consistent with the e-servqval theory proposed by [Parasuraman et al. \(2005\)](#), which identifies responsiveness as a crucial dimension influencing users' electronic service experiences and satisfaction. The results also support previous studies conducted within e-commerce environments, which reported that responsiveness and complaint handling remain important challenges in digital marketplace platforms. In relation to the research objectives, the findings indicate that responsiveness-related attributes represent important priorities for service quality improvement, particularly regarding the speed and effectiveness of customer service responses in handling user complaints and transaction problems.

Compensation Dimension

The compensation dimension achieved a mean performance score of 4.082 and a mean expectation score of 4.872, reflecting the critical importance of compensation fairness and refund policies in shaping user satisfaction. The analysis revealed that the suitability of compensation with the problem encountered, concerning the appropriateness of compensation relative to user losses, was positioned in Quadrant I (Concentrate Here). This attribute also recorded the highest gap value of -0.91, indicating that users perceive the existing compensation mechanism as insufficient and not fully aligned with their expectations. Therefore, improving fairness and transparency in compensation policies should become a strategic priority.

Ease of the refund/return process, related to the ease of refund and return procedures, was classified into Quadrant II (Keep Up the Good Work), indicating that this aspect has successfully met

user expectations and should be consistently maintained. Meanwhile, the speed of the refund process was positioned in Quadrant III (Low Priority), suggesting relatively lower strategic urgency despite remaining relevant to user experience.

Furthermore, clarity of Shopee's refund policy and satisfaction with the compensation policy were categorized into Quadrant IV (Possible Overkill), indicating relatively high performance despite lower perceived importance. These findings suggest that while refund and compensation policies are generally well implemented, resource allocation should be more strategically directed toward attributes with higher priority based on users' evaluations and gap scores, particularly those located in Quadrant I.

The findings related to the compensation dimension are consistent with the e-servqual framework, which emphasizes the importance of fair compensation and effective problem recovery mechanisms in electronic services. Compensation policies influence users' perceptions of fairness and organizational responsibility when transaction problems occur. Previous studies have similarly reported that refund procedures and compensation transparency play important roles in influencing customer trust and satisfaction in e-commerce platforms. Therefore, the identified gaps suggest that Shopee should strengthen compensation mechanisms and improve users' perceptions regarding the fairness and adequacy of problem resolution processes.

Contact Dimension
The contact dimension recorded a mean performance score of 4.012 and a mean expectation score of 4.83. No attributes were identified in Quadrant I (Concentrate Here), indicating the absence of highly important service aspects with inadequate performance. This finding suggests that, overall, the platform has been relatively successful in meeting user expectations regarding communication accessibility and customer support services.

Quadrant II (Keep Up the Good Work) included attributes related to the ease of contacting Shopee customer service, availability of various communication channels (chat, help center), including courtesy and service attitude, as well as the politeness and friendliness of customer service representatives. The positioning of these attributes indicates that the platform has effectively delivered service performance aligned with user expectations. Therefore, maintaining consistency in these areas is essential to sustaining user trust and satisfaction.

Meanwhile, Quadrant III (Low Priority) comprised attributes associated with the speed of access to customer service and the professionalism of customer service representatives. Although these aspects demonstrated relatively lower strategic importance compared to other contact-related attributes, gradual improvements remain necessary to support overall service quality enhancement.

Furthermore, no attributes were positioned in Quadrant IV (Possible Overkill), suggesting that resource allocation within the contact dimension remains proportionate and aligned with user expectations. This finding indicates the absence of excessive managerial focus on attributes with relatively lower strategic priority based on the quadrant mapping results.

These findings support the e-servqual theory proposed by [Parasuraman et al. \(2005\)](#), which identifies communication accessibility and customer support availability as important dimensions of electronic service quality. The relatively positive evaluation of contact-related attributes indicates that Shopee has generally provided accessible communication channels and satisfactory customer support services. The findings are also consistent with previous e-commerce studies emphasizing the importance of customer service accessibility in maintaining user trust and satisfaction. In relation to the research objectives, the results suggest that maintaining communication quality and customer support consistency remains important for sustaining positive user experiences within the Shopee platform.

CONCLUSIONS

This study descriptively examined the electronic service quality of the Shopee e-commerce platform using the E-SERVQUAL and Cartesian diagram approaches. The findings indicate that all service quality dimensions generated negative gap values, demonstrating that users' perceived experiences remained below their expectations across all evaluated dimensions. Although the platform achieved relatively high-performance scores, the consistently higher expectation scores suggest that service quality improvement remains necessary in several critical areas.

Among the seven evaluated dimensions, responsiveness recorded the largest negative gap, particularly in attributes related to problem resolution and the appropriateness of solutions provided by customer service. System availability, fulfillment, privacy, and compensation also demonstrated considerable service gaps, especially regarding application stability, stock availability consistency, data security reliability, and compensation fairness. In contrast, several contact-related attributes were generally perceived more positively and relatively aligned with user expectations. These findings descriptively indicate that users place substantial importance on responsive support services, reliable transaction systems, and transparent problem-handling mechanisms within e-commerce platforms. The Cartesian analysis further identified several attributes positioned in Quadrant I (Concentrate Here), indicating high importance but relatively inadequate performance. These attributes primarily involved customer service responsiveness, application stability during peak usage periods, stock information accuracy, user data protection reliability, and compensation appropriateness. Therefore, the findings suggest that managerial improvement efforts should be prioritized toward these high-importance service attributes to reduce the identified service quality gaps.

From a theoretical perspective, this study provides empirical support for the multidimensional nature of electronic service quality proposed in the E-SERVQUAL framework. The findings demonstrate that users evaluate e-commerce service quality not only based on technical efficiency, but also through reliability, responsiveness, privacy protection, compensation mechanisms, and communication accessibility. In addition, this study contributes contextual insight into Indonesian e-commerce users, who appear to demonstrate particularly high expectations regarding responsiveness, transaction reliability, and service recovery mechanisms within highly competitive digital marketplace environments.

Overall, the study contributes descriptive evidence regarding priority areas for improving electronic service quality within Shopee's platform environment. The findings may serve as a practical reference for service evaluation and strategic quality improvement, particularly in dimensions exhibiting substantial expectation–performance gaps.

LIMITATION & FURTHER RESEARCH

Several limitations should be acknowledged to ensure appropriate interpretation of the findings. First, this study does not provide item-level reporting for each questionnaire indicator, thereby limiting a more detailed evaluation of individual service attributes within the E-Servqual dimensions. Second, the study applies a purely descriptive approach without inferential statistical testing; therefore, the analysis is limited to describing perception–expectation gaps and service attribute priorities rather than examining structural relationships between variables. Third, the use of purposive sampling and online questionnaire distribution may introduce self-selection bias, since respondents who voluntarily participated may possess different platform experiences compared to non-participants.

In addition, this study does not explicitly control respondents' transaction characteristics, such as purchase frequency, transaction value, product categories, or delivery intensity, which may contribute to variations in users' evaluations of electronic service quality. The findings are also

limited in their generalizability because the respondents consist only of long-term Shopee users who have used the platform for at least five years. Consequently, the results may not fully represent perceptions of newer users or users from different e-commerce platforms.

From a conceptual perspective, the E-Servqual framework primarily focuses on electronic service performance and may not fully capture broader dimensions of user experience within contemporary digital marketplace environments. Several important constructs discussed in recent e-commerce literature, including trust, loyalty, perceived risk, seller reliability, application usability, logistics experience, and complaint resolution experience, were not incorporated into the present study. Therefore, users' evaluations of digital marketplace services may involve additional considerations beyond the service quality dimensions measured in this research.

Future research is encouraged to employ larger and more diverse samples to improve external validity and representation across different user groups. Comparative studies involving multiple e-commerce or mobile commerce platforms may also provide broader insights into electronic service quality evaluation within different marketplace environments. In addition, future studies may consider integrating additional constructs related to user experience and digital consumer behavior to develop a more comprehensive understanding of service evaluation in e-commerce contexts.

Furthermore, future research may employ inferential analytical approaches such as Structural Equation Modeling (SEM), provided that the research design is supported by a stronger theoretical framework, validated measurement instruments, adequate sample size, and theoretically grounded structural relationships. Therefore, SEM should not be viewed merely as a general methodological enhancement, but as a distinct analytical approach requiring different methodological and theoretical considerations from descriptive e-servqual studies.

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