

Analysis of Service Quality Using the Servqual Method and Importance Performance Analysis (IPA) at PT. XYZ

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The data shows a significant number of consumers canceling their home unit purchases in 2023, which has become a serious concern for PT. XYZ. In the highly competitive market of Batam with 70 developers, service quality is key to maintaining a competitive edge. This study aims to measure customers' expectations and perceptions of the service and identify the gap between them using the Servqual and Importance Performance Analysis (IPA) methods. The results indicate a discrepancy between customer expectations and perceptions of the service quality provided. Based on the Importance Performance Analysis (IPA) and Cartesian diagram, several service quality attributes are classified as very low, and improvements will be made in these areas. The researchers suggest that PT. XYZ should pay more attention to the quality of service provided to customers and focus on improving the reliability and responsiveness dimensions.

Keywords: Service Quality, Servqual, Importance Performance Analysis (IPA).

1. Introduction

In an era of rapidly growing business, service quality increasingly impacts as a key factor in retaining and attracting customers. Service quality not only affects customer satisfaction but also influences the company's image and long-term success. Therefore, a deep understanding of service quality is essential for maintaining a competitive edge.

PT. XYZ is a housing developer company located in Batam, committed to providing excellent service quality to its customers and offering solutions to any problems they may face. Measuring customer satisfaction is crucial to understanding the level of service quality provided by the company. This study employs the Servqual and Importance Performance Analysis (IPA) techniques to evaluate and analyze service quality. The Servqual method measures the gap between consumer assumptions and expectations. [1] The opinion is that using the Servqual method is conducted based on the gap between service perceptions before the sale and customer perceptions after the sale. Meanwhile, IPA helps identify the strengths and weaknesses of the service based on the importance of attributes and customer satisfaction. [2] It is believed that using the IPA technique helps establish priorities through various attributes for measuring service quality. IPA is used to determine the dimensions that should be prioritized for improvement [3].

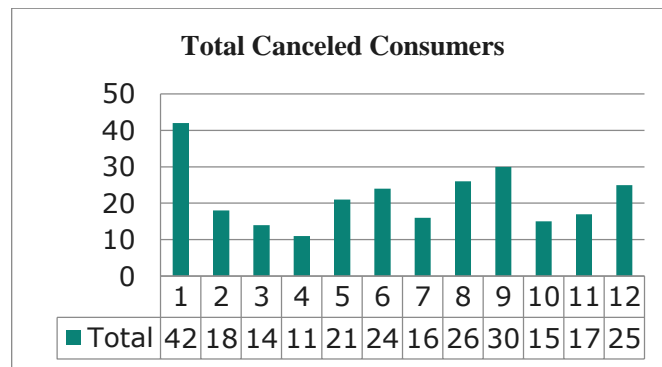


Figure 1: Canceled Consumers in 2023
Source: Company data processed and analyzed

In Figure 1, the data shows the total number of consumers who canceled their home unit purchases in 2023, which is a serious concern for PT. XYZ. This is particularly significant given the intense competition among developers in Batam, where around 70 development companies operate. Thus, the study uses Servqual and IPA. The objective of this research is to measure customer perceptions and expectations of the service provided and to identify the gaps between them. The evaluation results will provide specific and measurable improvement recommendations, allowing the company to implement more efficient strategies to enhance service quality and better meet customer needs. By gaining a better understanding of consumer needs and desires, the company aims to implement effective strategies to achieve higher service quality and maintain customer trust.

2. Theoretical Review

2.1 Servqual Method

The Servqual technique is commonly used to measure service quality [4]. This technique was developed by Parasuraman, Zeithaml, and Berry in 1985 and aims to measure customer perceptions of the service quality they receive. The method emphasizes the importance of understanding and meeting customer expectations across various aspects of service.

Regarding quality itself, there are several elements of service quality, including:

1. Tangibles, refers to the provision of facilities within the company's premises and the company's physical appearance. This includes physical facilities, employees, and communication resources [5].
2. Reliability, is the ability to provide a service that aligns with what was promised, delivered promptly and accurately, and meets customer satisfaction.

It means that employees deliver service in accordance with customer expectations [5].

3. Responsiveness, is the ability to provide swift and accurate service to customers, through clear communication of information. Responsiveness requires staff to assist customers and deliver service promptly, which involves motivating employees to resolve issues encountered by customers while using the service [5].
4. Assurance, encompasses the knowledge, courtesy, and competence of company employees to instill confidence in customers regarding the company's services. Assurance includes the expertise, politeness, skills, and reliable character of staff, ensuring that services are free from danger, risk, or concern. It relates to employees' ability to address and resolve customer issues or complaints [5].
5. Empathy, is the genuine and individualized attention given to customers. By striving to understand customer needs, empathy involves facilitating relationship-building, providing good interactions, and understanding individual customer requirements. It reflects employees' sincere attitude towards delivering customer service [5].

2.2 Importance Performance Analysis (IPA) Method

The IPA technique is a descriptive statistical method. It was first developed by John A. Martilla and John C. James in 1977 with the aim of measuring the correlation between customer perceptions and priorities for improving product or service quality [6]. Since its introduction, IPA has been widely accepted and used across various fields of study due to its ease of application and the clarity of the analysis results, which facilitate the development of performance improvement proposals.

IPA is an analytical method used to identify key performance aspects that an organization needs to deliver in order to satisfy its service users. This technique also compares the measurement process between expectations and perceived performance to assess customer satisfaction. Additionally, the method helps identify attributes with suboptimal performance and customer complaints, allowing for structured improvement steps to be established, starting with attributes deemed critical but still lacking in performance.

The steps in using the IPA technique involve calculating the performance score of the organization as follows: $\text{score} = \text{perception} \times \text{level of importance}$. This implies that the higher the score, the greater the priority.

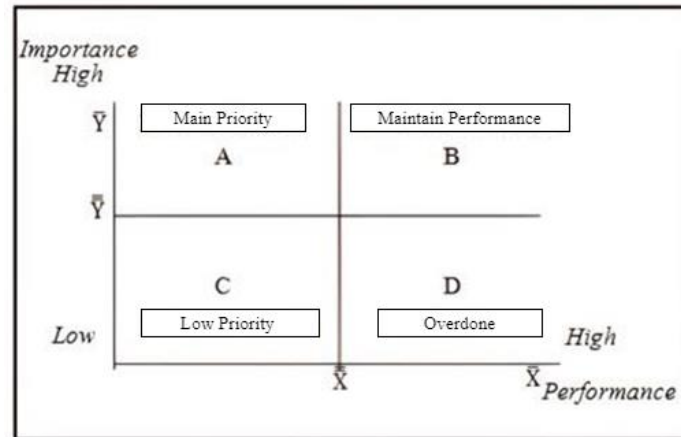


Figure 2: Cartesian Diagram
Source: Journal reprocessed

3. Research Methods

3.1 Types and Sources of Data

The type of data used in this study is primary data. Primary data can be defined as data sources that directly provide data to the data collector [7]. This study uses primary data sources. Data was obtained and collected directly from the study subjects. The researcher collected data through questionnaires, which provided a set of written statements to the respondents [7]. The primary data for this study was collected directly from informants.

3.2 Sample Size Determination Technique

The saturated sampling method is a sampling technique where all members of the population are used as samples [8]. The method used to determine the sample size in this study is the saturated sampling method. When planning the study, service quality was to be analyzed using a saturated sample from October to December with a total population of 128. With this approach, it is expected that the research will provide a comprehensive picture of service quality during the months of October to December, capturing the overall customer experience.

3.3 Validity Test

The purpose of the validity test is to determine whether the survey is considered valid. A questionnaire is deemed valid if the questions posed align with the expectations outlined in the questionnaire.

1. A statement is considered valid if the calculated r-value (r-count) > r-table.

2. A statement is considered invalid if the calculated r-value (r-count) < r-table. The equation used to test validity is:

$$r_{xy} = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{\{n \sum X^2 - (\sum X)^2\}\{n \sum Y^2 - (\sum Y)^2\}}}$$

Explanation:

rx_y = Correlation coefficient

$\sum X$ = Total score of item X

$\sum Y$ = Total score

3.4 Reliability Test

The reliability test is used to measure and test the questionnaire that serves as a benchmark for the variables. The standard for reliability testing has the following characteristics: if the alpha coefficient result is > 0.6, the instrument is considered reliable or trustworthy, whereas if the alpha coefficient result is < 0.6, the instrument is considered unreliable. The formula for the reliability test is:

$$R_{ac} = \left(\frac{k}{k-1} \right) \left(\frac{1 - \sum ob^2}{\sigma^2} \right)$$

Explanation:

R_{ac} = Reliability coefficient

K = Number of questions

$\sum ob^2$ = Total item variance

σ^2 = Total variance

3.5 Servqual Method

The Servqual method is used to measure the quality of service attributes by identifying gaps between consumer expectations and the service received (perceived service). After collecting the survey data, the average for each question is calculated for all respondents.

$$\bar{x} = \frac{\sum_{i=1}^n X_i}{n}$$

$$\bar{y} = \frac{\sum_{i=1}^n Y_i}{n}$$

Explanation:

\bar{X} = Average level of satisfaction or reality

\bar{Y} = Average level of desire or expectation

N = Total number of informants

3.6 Importance Performance Analysis (IPA) Method

The IPA method is conducted within quadrants. The use of critical performance analysis aims to measure service satisfaction within the critical performance matrix map quadrants. In this approach, Equation 5 below must be used to measure relevance and determine how satisfied consumers are with the company's performance and how informed they are about the service provided by the service provider.

$$Tki = \frac{xi}{yi} \times 100 \%$$

Explanation:

- Tki = Informant alignment level
- Xi = Average score of the company's performance
- Yi = Average score of the informants' expectations

4. Results and Discussion

The demographic data of the respondents show that the majority are male, accounting for 57.85%, while females account for 42.2%. Based on the highest level of education, 2.3% of the respondents have completed junior high school, 43.8% have completed high school or vocational school, 20.3% have a diploma (D3), and 33.6% have a bachelor's degree (D4/S1). In terms of occupation, 25.78% of the respondents are civil servants, 21.88% are private employees, and 52.34% are entrepreneurs. This data provides a clear picture of the respondents' backgrounds, which plays an important role in the subsequent analysis related to their perceptions and expectations of service quality.

The processed data is then analyzed through various in-depth and detailed stages. First, the data is tested to ensure its adequacy, validity, and reliability. In the context of this research, the data processing regarding service quality will be conducted using the Servqual and IPA techniques. Servqual is used to assess service quality based on five main dimensions: Physical Evidence, Reliability, Responsiveness, Assurance, and Empathy. The processed data will be used to calculate the Servqual scores, which will then be analyzed to identify gaps between customer expectations and their perceptions of the service received. IPA will be used to identify the most critical service attributes for customers and to assess the actual performance on these attributes. This analysis will help identify areas where service performance needs improvement, as well as areas that meet or even exceed customer expectations.

4.1 Validity Test

4.1.1 Customer Expectations Validity Test

The r-table value is obtained based on the degrees of freedom, with $df = N - 2$ = total sample ($128 - 2 = 126$), and at a significance level of 5% (0.05), the value is 0.174.

Table 1 Customer Expectations Validity Test
Source: Processed data, 2024

Attribute	r-count	r-table	Information
Tangibles			
X1.1	0,606	0,174	Valid
X1.2	0,660	0,174	Valid
X1.3	0,659	0,174	Valid
Reliability			
X2.1	0,604	0,174	Valid
X2.2	0,698	0,174	Valid
X2.3	0,661	0,174	Valid
Responsiveness			
X3.1	0,605	0,174	Valid
X3.2	0,505	0,174	Valid
X3.3	0,479	0,174	Valid
Assurance			
X4.1	0,802	0,174	Valid
X4.2	0,823	0,174	Valid
X4.3	0,820	0,174	Valid
Emphaty			
X5.1	0,827	0,174	Valid
X5.2	0,791	0,174	Valid
X5.3	0,810	0,174	Valid

From Table 1, it is evident that the calculated r-values (r-count) for all customer satisfaction survey questions exceed the r-table value, leading to the conclusion that all questions are valid.

4.1.2 Company Performance Validity Test

The r-table value is obtained based on the degrees of freedom, with $df = N - 2$ = total sample ($128 - 2 = 126$), and at a significance level of 5% (0.05), the value is 0.174.

Table 2 Company Performance Validity Test
Source: Processed data, 2024

Attribute	r-count	r-table	Information
Tangibles			
X1.1	0,711	0,174	Valid
X1.2	0,490	0,174	Valid
X1.3	0,632	0,174	Valid
Reliability			
X2.1	0,717	0,174	Valid
X2.2	0,750	0,174	Valid
X2.3	0,724	0,174	Valid
Responsiveness			
X3.1	0,745	0,174	Valid
X3.2	0,746	0,174	Valid
X3.3	0,799	0,174	Valid
Assurance			
X4.1	0,784	0,174	Valid
X4.2	0,811	0,174	Valid
X4.3	0,733	0,174	Valid
Emphaty			
X5.1	0,789	0,174	Valid
X5.2	0,786	0,174	Valid
X5.3	0,743	0,174	Valid

Based on Table 2, it is evident that the calculated r-values (r-count) for all customer satisfaction survey questions exceed the r-table value, leading to the conclusion that all questions are valid.

4.2 Reliability Test

4.2.1 Customer Expectation Reliability Test

Table 3 Customer Expectation Reliability Test
Source: Processed Data, 2024

Cronbach's Alpha	N of Item
,922	15

According to the results obtained in Table 3, the Cronbach's alpha for customer expectations is 0.922. Therefore, the reliability testing results for the service quality benchmark are reliable or trustworthy.

4.2.2 Company Performance Reliability Test

Table 4 Company Performance Reliability Test
Source: Processed Data, 2024

Cronbach's Alpha	N of Item
.936	15

According to the results obtained in Table 4, the Cronbach's alpha for customer expectations is 0.936. Therefore, the reliability testing results for the service quality benchmark are reliable or trustworthy.

4.3 Service Quality Analysis (Servqual)

After data processing, satisfaction values can be interpreted as follows: A negative satisfaction value (<0) indicates a gap between consumer expectations and perceptions, meaning the quality of service does not meet expectations. Conversely, a positive satisfaction value (>0) indicates that the quality of service exceeds consumer expectations. If the satisfaction value is equal to zero ($=0$), it signifies that the quality of service has met consumer expectations.

Table 5 Service Quality Analysis (Servqual)
Source: Processed Data, 2024

Dimensions	Attribute	Perception	Hope	Gap
Tangibles	X1.1	4.4	4.2	0.2
	X1.2	4.3	4.2	0.1
	X1.3	4.6	4.3	0.3
Average		4.4	4.2	0.2
Reliability	X2.1	3.4	4.1	-0.7
	X2.2	3.5	4.1	-0.6
	X2.3	3.6	4.1	-0.5
Average		3.5	4.1	-0.6
Responsiveness	X3.1	3.3	4.1	-0.8
	X3.2	3.3	4.2	-0.9
	X3.3	3.6	4.1	-0.5
Average		3.4	4.1	-0.7

Assurance	X4.1	3.9	3.9	0
	X4.2	4	3.9	0.1
	X4.3	3.9	3.9	0
Average		3.9	3.9	0.0
Emphaty	X5.1	4.1	4	0.1
	X5.2	4.2	4.2	0
	X5.3	4.1	4.1	0
Average		4.1	4.1	0.0
Total Average		3.9	4.1	-0.2

4.4 Importance Performance Analysis (IPA) Analysis

The analysis using Importance Performance Analysis (IPA) is carried out to identify the high expectations of customers where the performance level or reality perceived is still low, so that PT. XYZ can focus more on improving these indicators. The Cartesian diagram can be seen as follows:

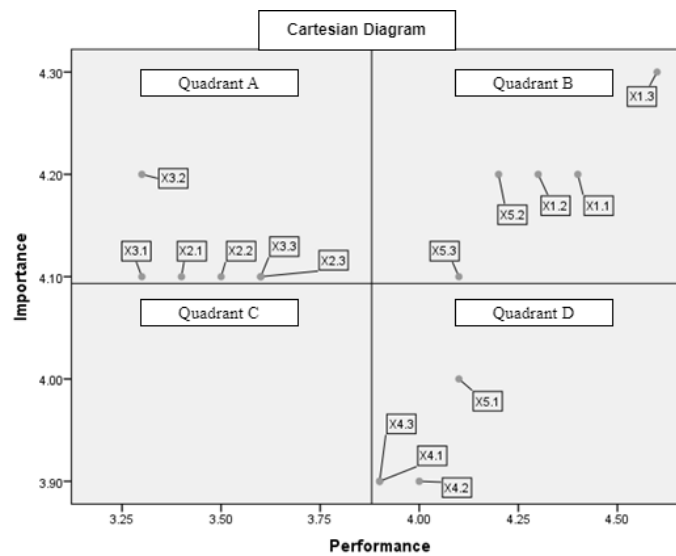


Figure 4 Cartesian Diagram of IPA
Source: Processed Data, 2024

5. Improvement Proposals

Based on the research findings on the service quality at PT. XYZ, analyzed using the Servqual method and Importance Performance Analysis, two service quality dimensions were found to have negative gaps: reliability and responsiveness. According to research by [9], these dimensions significantly affect customer satisfaction. The following are some improvement proposals that the company can implement:

1. Reliability Dimension

The attributes prioritized for improvement in the reliability dimension are: Employees provide service as promised, Employees always deliver service accurately and correctly, and Employees provide service according to customer expectations and ensure customer issues are addressed. Improvement proposals include providing clear and accurate information about the services offered by employees, offering training and motivation to ensure employees have adequate knowledge and high competence, implementing effective customer complaint handling procedures, and conducting specialized training for employees to understand and meet customer expectations, ensuring every issue is resolved satisfactorily [9].

2. Responsiveness Dimension

The attributes prioritized for improvement in the responsiveness dimension are: Employees respond quickly to customer inquiries or complaints, Employees provide assistance promptly, and Employees give sincere attention to customers. Proposed improvements include developing clear procedures for responding to customer inquiries or complaints, offering a responsive and efficient call center service for rapid customer issue resolution, and using customer feedback to evaluate and enhance the quality of service with a more genuine and caring approach [9].

6. Conclusion

The conclusions drawn from the research “Service Quality Analysis Using the Servqual Method and Importance Performance Analysis (IPA) at PT. XYZ” are as follows:

1. Based on the research using the Servqual method, a gap was found between customer expectations and perceptions of the service quality provided by PT. XYZ. This result indicates that customers feel the quality of service received does not yet meet their expectations, with the average overall service quality score being below expectations at -0.2.
2. The results of the Importance Performance Analysis and Cartesian diagram indicate that there are several attributes where the company's performance is considered very low and improvements will be made.

7. Recommendations

Based on the research findings, the practical and theoretical recommendations are as follows:

1. To improve service quality, PT. XYZ should pay more attention to the quality of services provided to customers and focus on enhancing the reliability and responsiveness dimensions.
2. For future research, it is recommended to broaden the scope by incorporating more research tools related to service quality. Additionally, increasing the number of respondents in the study will enhance the accuracy and validity of the results obtained, thereby providing more precise and effective recommendations for improving service quality.

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