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Analysis of Service Quality Using Service Quality and IPA Methods at XYZ Cafes

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ABSTRACT

XYZ Cafe is an MSME business in Gresik Regency with a target market of teenagers and surrounding office employees. Cafe management evaluates cafe services for consumer complaints, which decreases the number of cafe visitors. Service quality is essential in marketing current products so that products can be well received in the market. The method used to determine the quality of service is service quality while determining the service attributes that need to be improved using the importance-performance analysis method. The quality of service provided by the XYZ Gresik cafe is based on service quality. From the results of the IPA analysis, the results of quadrants I, II, have relatively high demand, and quadrants III, IV, have relatively low demand with a relatively high level of satisfaction, so it is considered excessive. And from the GAP calculation results using the service quality method has a negative value.

Keywords: *cafe, service quality, importance-performance analysis (IPA), service quality, servqual method integration*

Introduction

Business at this time has quite a rapid development. One is the culinary business, which has contributed as much as 35% to the business world and has a growth of 9.5% each year.[1]One of the businesses in the culinary field that is developing quite rapidly is the cafe business. A cafe is a place that provides snacks and various drinks, such as tea, coffee, and juice, with a comfortable cafe atmosphere and a unique menu.[2]One example is Cafe XYZ, an MSME business in Gresik Regency, with a target market for teenagers and nearby office employees. This cafe has a modern classic concept and is strategically located in the GKB area. The cafe management, which has been managing the cafe for 3 years, is currently evaluating the cafe's services due to complaints that resulted in a decrease in the number of cafe visitors.

Service quality is important in maintaining company excellence because service quality is the focus of attention and as a strategic issue for a company. so that the product can be well received in the market, companies must provide services following what has become customer expectations to improve service quality. The higher the quality of service received by customers compared to expectations, the customer will undoubtedly be satisfied with our service quality[3]–[7]

In the Service Quality method, there are five dimensions of service quality used to assess quality, including equipment, 1) Tangible (physical appearance) in the form of the appearance of the business; 2) Reliability, namely the ability to provide the promised service accurately, immediately and give satisfaction; 3) Responsiveness, namely the willingness of members to create consumers and provide responsive services; 4) Assurance, namely the ability, knowledge, courtesy, and trustworthy nature of staff that is free from risk, danger, or doubt; 5) Empathy (Empathy) in the form of ease in carrying out good communication, individual attention, and understanding of consumer needs.

In the Service Quality method, five dimensions of service quality have a high degree of correlation between several variables

1. Tangibles (Physical appearance)
2. Reliability (a performance that can be relied upon)
3. Responsiveness (Speed and accuracy)
4. Assurance (Credibility, security, competence, and courtesy of employees)
5. Empathy (Easy access, as well as good communication and understanding)

Using the service quality method, the GAP results will be obtained between the quality of service received by customers (perception) and the service desired by customers (expectations) to be used as a reference in improving service quality at XYZ Cafés.[7]–[13]

Importance Performance Analysis is a procedure to show the relative importance of various attributes in determining the primary attributes to identify areas or attributes for service quality improvement. This method is used to classify which attributes are the top priority for improvement by measuring the service performance and the level of importance of these attributes according to customers.

Some of the results of previous studies revealed that product quality could prove consumer satisfaction[14]. However, these results differ from the findings [6] on the influence of product quality, service quality, and physical environment, which states that product quality does not significantly affect customer satisfaction at a Cafe in Gresik. Furthermore, the influence of product quality and service quality on consumer satisfaction[15]. The Effect of Service Quality on Customer Satisfaction[16]–[22]; The Effect of Sales Promotion and Service Quality on Repurchase Interests[23]; the effect of service quality, product, price, and location on customer loyalty[24] can prove that service quality is having a direct impact on customer satisfaction.

Research Methods

In this study, used to analyze the level of service quality, consumers were asked to assess the five dimensions of service quality in SERVQUAL, which affect the expectations and performance of customers on the service quality of cafes in Gresik. From the results of the caffe customer assessment, a gap value or gap value will be obtained from the results of the SERVQUAL calculation. Then an importance-performance analysis diagram is made to illustrate the relationship between the level of importance of an assessment criterion and the level of performance through 4 quadrants, which will then be calculated to determine the priority scale of service improvement for each assessment criterion.

A. Data Collection Stage

In this research, data collection was carried out by giving questionnaires to customers or users of cafe services. The questionnaire is based on interviews and literature studies on the five dimensions of Servqual that have been mentioned. Fill out the questionnaire using a Likert scale with 1 = Very dissatisfied; 2 = Not satisfied; 3 = Quite satisfied; 4 = Satisfied; 5 = Very satisfied. Likewise, the Attribute's level of importance has a meaning of 1 = Very unimportant; 2 = Not important ; 3 = Quite important; 4 =Important 5 =Very important.[25]

B. Sample Processing Stage

In this research, the sample is processed using the data adequacy test. Then validity & reliability tests are carried out so that, in the end, it can be analyzed using the servqual method in the form of calculating the difference or gap between the service received by the customer (perception) and the service desired by the customer (expectation).

C. Data Adequacy Test Phase

In this study, the sample used was 50 questionnaires filled out by cafe customers. With a confidence level of 95% (0.95) and an error rate of no more than 5% (0.05). Then the calculation is as follows.

$$n = \frac{N}{1+Ne^2} \quad (1)$$

Where :
n : Minimum number of samples
N: Number of Respondents
e: error rate

D. Data Validity Test Phase

In addition to the manual method as follows

$$r = \frac{N\sum XY-(\sum X)(\sum Y)}{\sqrt{N\sum(X^2-(\sum X)^2)(N\sum(Y^2-(\sum Y)^2))}} \quad (2)$$

Where :
r : correlation coefficient
$\sum$X: sum of item scores
$\sum$Y: the total score of the items
N : number of respondents

Validity testing can also be done with SPSS software, Microsoft Excel, and others. An attribute is said to be valid if the r-count value obtained is greater than the r-table value.

E. Data Reliability Test Phase

Reliability is an index that shows the extent to which a measuring instrument can be trusted or relied on. Reliability testing can be done using SPSS software version 25. The Attribute is declared reliable if, after being tested, it produces an alpha value above 0.60

Results and Discussions

In this service quality analysis, data collection is qualitative, which contains the service attributes needed at the XYZ Cafe service using the Service Quality approach. And it is derived from five service quality dimensions, often referred to as tangible, reliability, responsiveness, assurance, and empathy.
The following are the service attributes obtained from the results of a literature study and SOP for the cafe

Table 1. Dimensions of service quality

Variable	Dimensions	Attribute
X1	Tangibles (physical appearance)	1. The neatness of the barista or employees at work
X2		2. Clean and comfortable place
X3		3. Enough lighting for each room
X4		4. Has adequate seating
X5		5. Adequate air circulation
X6	Reliability (reliability)	1. Readiness of employees in handling customer complaints/complaints
X7		2. Menu presentation time efficiency
X8		3. The taste of the menu served is always consistent
X9		4. Affordable drink prices
X10	Responsiveness (responsiveness)	1. Quick and responsive in dealing with customer complaints
X11		2. Provide clear information about the menu
X12		3. Provide recommendations for the best seller menu
X13		4. Baristas/employees are patient in serving customers
X14	Assurance	1. Guarantee product quality
X15		2. Barista friendliness to consumers
X16		3. Barista/employee knowledge of available menus
X17		4. Venue security guarantee
X18	Empathy (care)	1. Can accept criticism and suggestions
X19		2. Caring and responsive attitude of employees when serving consumers
X20		3. Helping consumers when confused when ordering

A. Sampling Stage

At this stage, the solving formula is used with 50 respondents who have filled out the XYZ cafe service quality questionnaire. Then the calculation formula for the ampel is as follows

$$n = \frac{N}{1 + Ne^2} \quad (3)$$

$$n = \frac{50}{1 + (50)(0{,}05)^2}$$

$$n = \frac{50}{1 + 0{,}125} = 44{,}4 \sim 45$$

Based on these calculations, the minimum data required is 45. So if you use 50 data, it meets the validity test requirements.

B. Perception Validity Test

Validity testing can also be done with SPSS software, Microsoft Excel, and others. An attribute is valid if the r-count value obtained is greater than the r-table value for df = N-2. For 50 respondents, then df = 50 - 2 = 48. From these respondents, a critical value of r is 0.284 (obtained from the r-table value).

The perception validity test was carried out with the help of Microsoft Excel software with the following formula
CORREL(B61:B110,$V$61:$V$110)
Information :
CORREL = the correlation that exists between two ranges of cells
Notation B61:B110 = Attribute value X1 from the first respondent to the last respondent
Notation V61:V110 = the total of all attributes from the first responder to the total of all attributes last respondent.

Table 1. Perceptual validity test

Variable	Attribute	R- count Perception	Information
X1	The neatness of the barista or employees at work	0.287	Valid
X2	Clean and comfortable place	0.430	Valid
X3	Enough lighting for each room	0.337	Valid
X4	Has adequate seating	0.554	Valid
X5	Adequate air circulation	0.343	Valid
X6	Readiness of employees in handling customer complaints/complaints	0.326	Valid
X7	Menu presentation time efficiency	0.518	Valid
X8	The taste of the menu served is always consistent	0.304	Valid
X9	Affordable drink prices	0.394	Valid
X10	Quick and responsive in dealing with customer complaints	0.334	Valid
X11	Provide clear information about the menu	0.476	Valid
X12	Provide recommendations for the best seller menu	0.351	Valid
X13	Baristas/employees are patient in serving customers	0.433	Valid
X14	Guarantee product quality	0.435	Valid
X15	Barista friendliness to consumers	0.402	Valid
X16	Barista/employee knowledge of available menus	0.508	Valid
X17	Venue security guarantee	0.536	Valid
X18	Can accept criticism and suggestions	0.506	Valid
X19	Caring and responsive attitude of employees when serving consumers	0.636	Valid
X20	Helping consumers when confused when ordering	0.502	Valid

From table 2, the perceptual validity test above can be interpreted that all attributes in perception are declared valid because the value of R-counting > R-table

C. Test the Validity of Expectations

The expectation validity test is carried out with the help of Microsoft Excel software with the following formula
CORREL(B119:B168,$V$119:$V$168)
Information :
CORREL = correlation of two cell ranges.
Notation B119:B168 = Attribute value X1 from the first respondent to the last respondent.
Notation Q119:Q168 = the total number of all attributes of the first to the last respondent

Table 2. Test the validity of expectations

Variable	Attribute	R- count Hope	Information
X1	The neatness of the barista or employees at work	0.423	Valid
X2	Clean and comfortable place	0.408	Valid
X3	Enough lighting for each room	0.544	Valid
X4	Has adequate seating	0.596	Valid
X5	Adequate air circulation	0.297	Valid
X6	Readiness of employees in handling customer complaints/complaints	0.306	Valid
X7	Menu presentation time efficiency	0.555	Valid
X8	The taste of the menu served is always consistent	0.585	Valid
X9	Affordable drink prices	0.319	Valid
X10	Quick and responsive in dealing with customer complaints	0.339	Valid
X11	Provide clear information about the menu	0.494	Valid
X12	Provide recommendations for the best seller menu	0.412	Valid
X13	Baristas/employees are patient in serving customers	0.424	Valid

X14	Guarantee product quality	0.429	Valid
X15	Barista friendliness to consumers	0.478	Valid
X16	Barista/employee knowledge of available menus	0.389	Valid
X17	Venue security guarantee	0.543	Valid
X18	Can accept criticism and suggestions	0.357	Valid
X19	Caring and responsive attitude of employees when serving consumers	0.551	Valid
X20	Helping consumers when confused when ordering	0.292	Valid

From table 3, the expectation validity test above can be interpreted that all the attributes in hope are stated to be valid because the value of R-count> R-table

Reliability Test

Reliability is an index that shows the extent to which a measuring instrument can be trusted or relied on. Reliability testing can be done using SPSS software version 25

D. Perceptual Reliability Test

Table 3. Perceptual reliability test

		N	%
Cases	Valid	50	100.0
	Excluded(a)	0	.0
	Total	50	100.0

Cronbach's Alpha	N of Items
.782	20

From the results of the SPSS test above, it read an Alpha value of 0.782, so it is stated that the level of importance is reliable because the lowest criterion for reliability is 0.6

E. Expectation Reliability Test

Table 4. Test the reliability of expectations

		N	%
Cases	Valid	50	100.0
	Excluded(a)	0	.0
	Total	50	100.0

Cronbach's Alpha	N of Items
.745	20

From the results of the SPSS test above, it reads an Alpha value of 0.782 so that it is stated that the level of importance is reliable because the lowest criterion for reliability is 0.6

F. Calculation of Servqual (Service Quality)

This value can be calculated by calculating the mean value or the average perceived score for each variable of customer satisfaction with the service

Example of calculating the mean perceived attribute X1 with the formula

$$\text{Perception} = \frac{(\mathbf{P1}\ x\ \mathbf{1}) + (\mathbf{P2}\ x\ \mathbf{2}) + (\mathbf{P3}\ x\ \mathbf{3}) + (\mathbf{P4}\ x\ \mathbf{4}) + (\mathbf{P5}\ x\ \mathbf{5})}{\mathbf{N}} \quad (4)$$

$$\text{Perception} = \frac{(\mathbf{0}\ x\ \mathbf{1}) + (\mathbf{1}\ x\ \mathbf{2}) + (\mathbf{4}\ x\ \mathbf{3}) + (\mathbf{17}\ x\ \mathbf{4}) + (\mathbf{28}\ x\ \mathbf{5})}{\mathbf{50}}$$

$$\text{Perception} = \frac{\mathbf{220}}{\mathbf{50}} = 4.40$$

So the perception score of 50 respondents for X1 is 4.40

Hope

This value can be calculated by calculating the mean value or the average perceived score for each variable of customer satisfaction with the service

Example of Calculation of the mean Expected attribute X1 with the formula

$$\text{Hope} = \frac{(P1\ x\ 1)+ (P2\ x\ 2)+ (P3\ x\ 3)+ (P4\ x\ 4) +(P5\ x\ 5)}{N} \quad (5)$$

$$\text{Hope} = \frac{(0\ x\ 1)+ (0\ x\ 2)+ (1\ x\ 3)+ (10\ x\ 4) +(39\ x\ 5)}{50}$$

$$\text{Expectations} = \frac{235}{50} = 4.70$$

Calculation of Service Quality (GAP)

Gap data on perceptions and expectations (GAP) is needed to determine the expected service quality servqual score

Example: calculating the GAP on attribute X1

GAP = Mean perception – Mean expectation

GAP = 4.40 – 4.70 = - 0.3 (6)

Table 5. Servqual calculation

variable	Attribute	Perception Scale 1-5	Hope Scale 1-5	GAP
XI	The neatness of the barista or employees at work	4,40	4.7	-0.3
X2	Clean and comfortable place	4,44	4.5	-0.06
X3	Enough lighting for each room	4.52	4.54	-0.02
X4	Has adequate seating	4.62	4.64	-0.02
X5	Adequate air circulation	4.54	4.52	0.02
X6	Readiness of employees in handling customer complaints/complaints	4,28	4.68	-0.4
X7	Menu presentation time efficiency	4.52	4.62	-0.1
X8	The taste of the menu served is always consistent	4.60	4.62	-0.02
X9	Affordable drink prices	4.56	4.7	-0.14
X10	Quick and responsive in dealing with customer complaints	4,32	4.6	-0.28
X11	Provide clear information about the menu	4.56	4.58	-0.02
X12	Provide recommendations for the best-seller menu	4.54	4.56	-0.02
X13	Baristas/employees are patient in serving customers	4.62	4.6	0.02
X14	Guarantee product quality	4.64	4.48	0.16
X15	Barista friendliness to consumers	4.56	4.68	-0.12
X16	Barista/employee knowledge of available menus	4.48	4.62	-0.14
X17	Venue security guarantee	4.54	4.56	-0.02
X18	Can accept criticism and suggestions	4.58	4.58	0
X19	The caring and responsive attitude of employees when serving consumers	4.54	4.54	0
X20	Helping consumers when confused when ordering	4.46	4.66	-0.2
	Means	4,516	4,599	-0.083

From the surqual calculation results, the mean on a scale of 1-5 is 4.516 with an expectation of a scale of 4.599and GAP -0.083 .

***G. Importance Performance Analysis*(IPA)**

Based on the table above, the mean value of perception is 4.599, and the mean expectation is 4.516. The results of the importance-performance analysis are presented in an IPA diagram using the SPSS application, as shown in Figure 1 below:

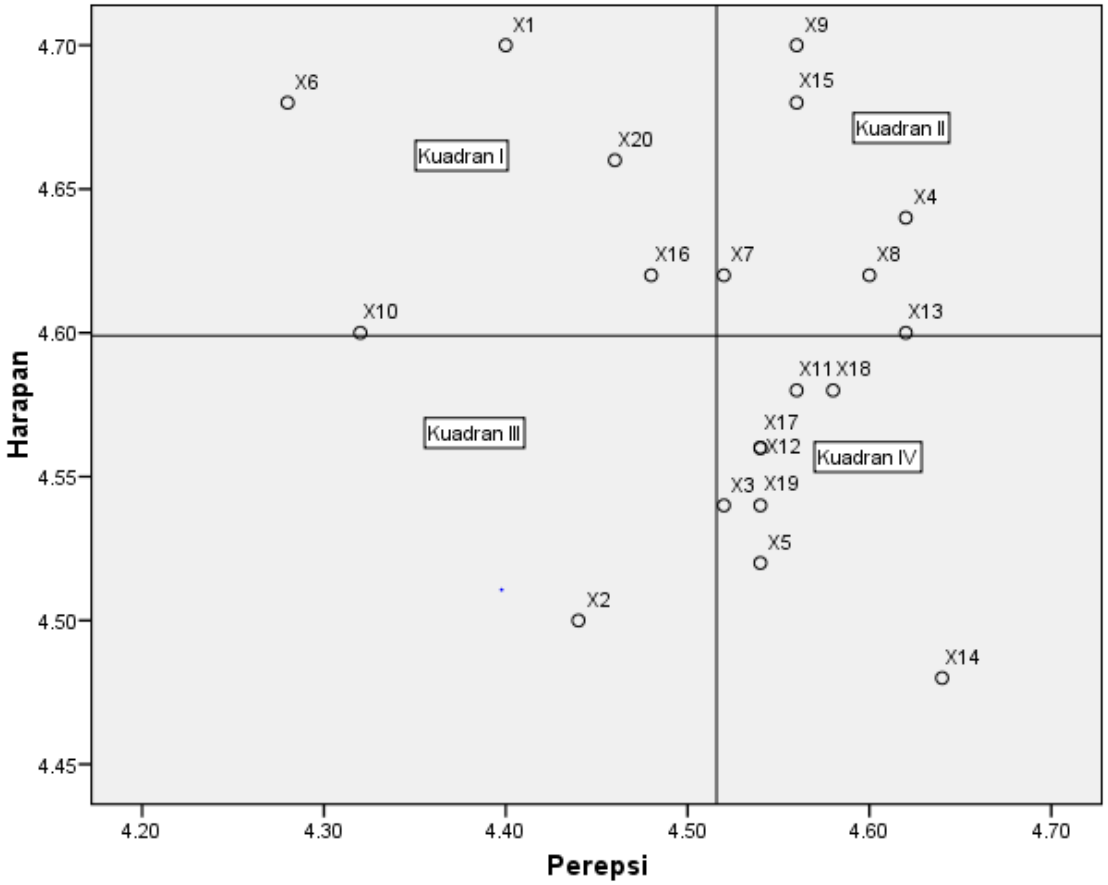

Figure 1. IPA diagram

In Figure 1. It can be seen that the attributes fall into quadrants I, II, III, and IV. In quadrant I, there are 5 attributes with a relatively high level of expectation with a low level of performance or perception, so that the reality is not following the expectations of service users. In quadrant II 6, attributes have relatively high expectations and perceived values. Items included in this quadrant are considered as supporting factors for service user satisfaction which must be maintained.

Quadrant III contains 1 attribute with relatively low expectations because the performance is not too special, so the attributes included in this quadrant have minimal effect on the benefits felt by consumers.In quadrant IV, it contains 8 attributes with relatively low expectations and a relatively high level of satisfaction, so it can be considered excessive.

Conclusion

Based on the results of the research and discussion on the analysis of customer satisfaction at the XYZ Gresik cafe, it can be concluded that the quality of service provided by the XYZ Gresik cafe based on the five dimensions of service quality obtained a perceived value of 4.516 and an expectation value of 4.599 with a negative gap value (-0.083). From the survival mean table calculation, the GAP value is -0.083, with 5 service attributes that are the main priority for improving service quality, namely (X1) The neatness of the barista or employees at work with a value of -0.03, (X6). The readiness of employees to handle complaints/ customer complaints with a value of -0.04, (X10) Fast and responsive handling of customer complaints with a value of -0.28, (X16) Barista/employee knowledge of available menu -0.14, (X20) Helping consumers when confused when ordering with a value of -0.2.

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