

Analysis Of Customer Satisfaction at PT. Sela Kontes Produksi Using Servqual, CSI, And IPA Methods

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ABSTRACT

PT. Sela Kontes Produksi is a company in Gresik district that organizes services for children's photo competition events. A significant decrease in participants is a problem PT Sela Kontes Produksi faces due to unresolved customer complaints. This research aimed to determine customer satisfaction with service quality and evaluate the level of service at PT Sela Kontes Produksi. The methods used are Servqual (Service Quality), CSI (Customer Satisfaction Index), and IPA (Importance Performance Analysis). Data was collected by distributing questionnaires to 60 respondents who were service users of PT Sela Kontes Produksi. The results of all questionnaire variables distributed were declared valid and reliable. Servqual data processing results in 7 attribute variables getting negative servqual scores, namely variable T1 (-0.10), T2 (-0.07), T3 (-0.10), T4 (-0.05), RS1 (-0.01), E3 (-0.07), E4 (-0.03). The results of CSI processing are known to get a value of 84.56%, which means that customers are "delighted" with the services provided. The results of IPA data processing show that the T4 variable is in quadrant 1, which means that this variable is the top priority for quality improvement.

Keywords: Customer Satisfaction, Servqual, CSI, IPA.

Introduction

In recent decades, competition in the service industry has intensified both at the local and global levels. Companies that prioritize the quality of services produced can withstand competitive competition because one of the determinants of a company's success is the quality of service it provides [1]. In the service sector, service is an essential aspect to consider. Good service is a service that can understand the wants and needs of consumers to provide more satisfaction value to consumers. [2].

Service quality is a technique carried out by every company to ensure its survival and customer satisfaction. The quality of service that must exist in every company includes security, comfort, and satisfying service. [3]. Customer satisfaction is the feeling of pleasure or disappointment experienced by someone after comparing reality with expectations from a service. [4] Consumers will feel satisfied if performance exceeds expectations and will not be satisfied if the opposite happens.

PT Sela Kontes Produksi is a company that organizes events. One of the events held is a children's photo competition. In the last few events, the number of participants has significantly decreased. Data on the number of participants can be seen in Figure 1.

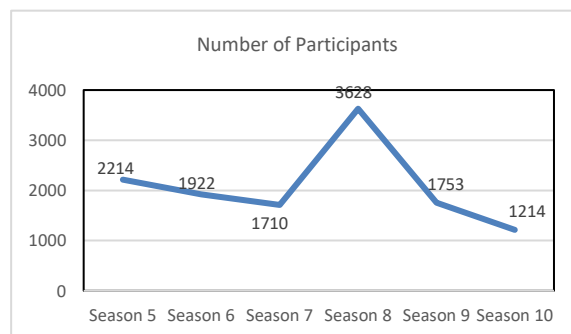


Figure 1 Number of Participants Data

The data above show a significant decrease in participants. The number of participants in the season 8 to season 9 event decreased by 1,814, and in season 9 to 10, it again decreased by 539. One factor that caused the decrease in the number of participants was that customer complaints were not resolved. Therefore, handling is needed to improve service quality at PT. Sela Kontes Produksi.

This research aimed to determine customer satisfaction with service quality and evaluate the level of service at PT Sela Kontes Produksi. It used the Service Quality (Servqual) method, Customer Satisfaction Index (CSI), and Importance Performance Analysis (IPA). It is hoped that this research can be an evaluation material in improving the quality of service of PT. Sela Kontes Produksi.

Research Methods

This research was conducted at PT Sela Kontes Produksi, in Gresik Regency, from October to November 2023. This research methodology begins with identifying problems in the field, then collecting research data through distributing questionnaires, determining the number of research samples, processing the data, and drawing conclusions from the research results.

The suitable approach methods used in this research are Servqual, CSI, and IPA. The Service Quality (Servqual) method is used to determine the value of the service quality gap from each attribute of perception and expectation of the services provided in 5 dimensions, namely: Tangible, Reliability, Responsiveness, Assurance, and Empathy, so that it can be seen which service attributes are improved in the future. [5]–[8] The Customer Satisfaction Index (CSI) method is used to measure the overall level of customer satisfaction with the services provided [9]. Meanwhile, Importance Performance Analysis (IPA) measures the level of importance and performance so that companies know which variables need to be prioritized for improvement. [10].

Sample Size Determination

In this research, the respondents selected were customers of PT Sela Kontes Produksi who had participated in the competition event at least once, with inclusion criteria including customers aged 17 years and over who had participated in the competition event once. The sample was determined using non-probability and purposive sampling, with questionnaires distributed online through Google From.

The average population size of PT Sela Production Contest participants in one month is 300 people. According to Arikunto, the sample size was determined when selecting respondents using the sample determination formula. The sample calculation formula is as follows. [11], [12]:

$$n = 10\% \times N \quad (1)$$

Where:

n: Sample Size

N: Population Size

From the above formula, if the research population <100 should be taken, but if the research population >100 , then a sample is taken between 10-15% or 20-25% [12].

Sample calculations for minimum data processing using the Arikunto formula with a population of 300 people and taking a scale of 20% as follows:

$$n = 20\% \times 300$$

$$n = 60$$

Calculating the number of samples using the Arikunto formula concludes that the minimum sample size of 60 people is sufficient to represent the population and is reliable and valid for distributing questionnaires.

Validity and Reliability Test

A validity test is conducted to determine the validity level of research data using questionnaires in data collection. [13]. A validity test is also used to determine the accuracy level of each variable question from a distributed questionnaire. In data validity testing, data is considered valid if the calculated r-value is greater than the table r-value. [14] In this research, validity testing is conducted using the statistical analysis software SPSS 25, the Pearson correlation method, with a confidence level of 95% and a significance level of 5%.

The Reliability Test determines the confidence level of a research instrument to produce genuinely reliable information. In this research, the reliability test uses the Cronbach Alpha method as its measurement. A variable is considered trustworthy if Cronbach's alpha value exceeds 0.70.

Servqual Method

The servqual method is a method of measuring service quality by using the characteristics of each dimension to obtain a gap score between the services received (perceptions) and expectations of the services received [15]–[17]. The Servqual method has five characteristic dimensions: tangibles, Reliability, Responsiveness, Assurance, and Empathy.

Tangible refers to the ability to demonstrate its existence to external parties. Reliability refers to the ability to provide services as promised by the company. Responsiveness is the ability to assist and provide service promptly and accurately. Assurance is the ability to foster a sense of trust in customers. Empathy is the ability to provide personal attention or assistance. The research variables of the 5 Servqual dimensions are a questionnaire with a Likert scale of 1-5. The research variables are presented in Table 1.

Table 1 Variables Research

No.	Dimension	Code	Research Variables
1	Tangibles	T1	The real existence of the event
2		T2	Event prizes as specified
3		T3	Transparency in assessment
4		T4	The existence of promotions carried out
5	Reliability	RL 1	Employees provide services on time [2]
6		RL 2	Clarity of employees in conveying information [12]
7		RL 3	The ability of employees to answer questions clearly and quickly understood [12]
8		RL 4	Convenience when making payments
9	Responsiveness	RS 1	Employee speed in service [18]
10		RS 2	Providing the correct information needed [19]
11		RS 3	Respond to customer complaints appropriately [19]
12		RS 4	Employees can resolve customer complaints [2]
13	Assurance	A1	Friendliness and courtesy [18]
14		A2	Security in making transactions
15		A3	Staff foster a sense of trust in participants [13]
16		A4	Employee skills in service [2]
17	Empathy	E1	Employees are easy for participants to contact [1]
18		E2	Always put the interests of the participants first [2]
19		E3	Provide feedback to participants [12]
20		E4	Receive complaints, suggestions, and criticism from participants [20]

In determining the servqual score, the average value of perceptions and expectations is calculated. From this average value, the value of the gap between perceptions and expectations will be known. [21]. The servqual gap score can be calculated using the following formula:

$$Q = P - E \quad (2)$$

Where:

Q: Quality of service

P: Perception

E: Expectation

Customer Satisfaction Index (CSI) Method

The Customer Satisfaction Index method is used to determine overall customer satisfaction by considering the importance level of measured product or service attributes. [22]. CSI can provide precise data regarding customer satisfaction levels, allowing the company to make regular evaluations and improvements to improve services that are considered unsatisfactory by customers [23].

You can use the following formula to calculate the CSI assessment. [23]:

$$CSI = \text{five} \frac{T}{5Y} \times 100\% \quad (3)$$

Where:

T: CSI Total Value

5: Maximum Value on Measurement Scale

Y: Total Value of Expectation Column

Meanwhile, the level of satisfaction is categorized into several levels, as follows. [24]:

Table 2 Standard Customer Satisfaction Index

Score	Descriptions
0% - 34%	Not satisfied
35% - 50%	Less satisfied
51% - 65%	Quite satisfied
66% - 80%	Satisfied
81% - 100%	Very satisfied

Importance Performance Analysis (IPA) Method

The IPA method has the advantage of being easy to use and simple. This method can map customer perceptions of the level of importance of services with customer perceptions of their performance to identify services that need improvement. [25]. The IPA method determines the conformity level between the importance level and implementation performance level. The conformity level will determine the priority order for improving customer satisfaction. The suitability level formula used is as follows:

$$Tki = \frac{Xi}{Yi} \times 100 \% \tag{4}$$

Where:

Tki: Conformance Level

Xi: Level of Performance/Perception Rating

Yi: Level of customer importance rating

Then, calculate the average for each performance variable assessment as perceived by customers using the following formula:

$$X = \frac{\sum Xi}{n} \tag{5}$$

$$Y = \frac{\sum Yi}{n} \tag{6}$$

Where:

X: Average Score of Implementation/Satisfaction Level

Y: Average Score Level of importance

n: Number of Respondents

This IPA method analysis results in a Cartesian diagram, which determines the quadrant in which the variable attributes are located. In IPA quadrant analysis using a Cartesian diagram, the X-axis is obtained from the performance level values, and the Y-axis is obtained from the importance level values. [26]. Quadrant divisions in the Cartesian diagram can be seen in Figure 2.

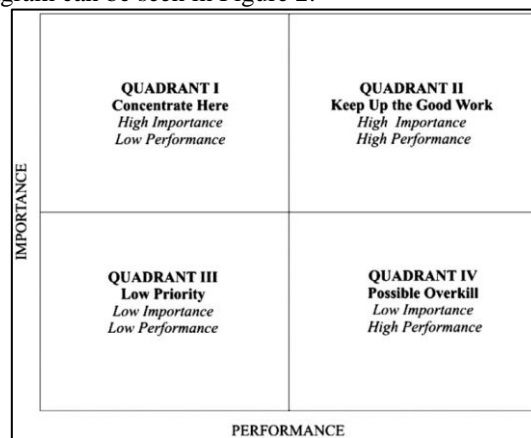


Figure 2. Cartesian Diagram

Where:

- 1) Quadrant I represents an area containing attributes with a low level of performance but that customers consider necessary. Attributes in Quadrant I must be improved immediately.

- 2) Quadrant II represents areas that have a high level of performance and importance. Attributes that are in quadrant II must maintain their quality.
- 3) Quadrant III represents areas with low performance and importance. Attributes in quadrant III are considered normal and not necessary.
- 4) Quadrant IV represents the area with high-performance levels but low importance. Attributes in quadrant IV are considered good performance, but customers do not consider their existence.

Results and Discussion

In this research, data was collected by distributing questionnaires, and the respondents were determined using non-probability sampling. Sampling was conducted using purposive sampling, where the author considered consumers to meet the desired criteria.

Servqual Data Processing

From the determination of the sample size above, 60 individuals were obtained and considered to represent the research population. Then, validity and reliability tests were conducted to demonstrate the validity and reliability of the research instrument. The r table value of the sample size of 60 people with a significance level of 5% is 0,254. The questionnaire is considered valid if the calculated r-value is greater than r-table. The results of the validity test are presented in Table 3.

Table 3 Validity Test Calculation Results

No	R _{count}		R _{table}	Note	No	R _{count}		R _{table}	Note
	Perception	Expectation				Perception	Expectation		
1	0,764	0,701	0,254	Valid	11	0,954	0,964	0,254	Valid
2	0,879	0,895	0,254	Valid	12	0,971	0,962	0,254	Valid
3	0,774	0,786	0,254	Valid	13	0,946	0,952	0,254	Valid
4	0,884	0,908	0,254	Valid	14	0,950	0,953	0,254	Valid
5	0,933	0,913	0,254	Valid	15	0,956	0,957	0,254	Valid
6	0,952	0,954	0,254	Valid	16	0,962	0,945	0,254	Valid
7	0,944	0,953	0,254	Valid	17	0,936	0,930	0,254	Valid
8	0,938	0,955	0,254	Valid	18	0,964	0,952	0,254	Valid
9	0,939	0,937	0,254	Valid	19	0,918	0,945	0,254	Valid
10	0,950	0,964	0,254	Valid	20	0,919	0,945	0,254	Valid

Next, reliability testing was conducted using Cronbach's alpha statistical test. Variables are considered reliable if the Cronbach's alpha value is greater than 0.70. The results of the reliability test are presented in Table 4.

Table 4 Reliability Test Calculation Results

Cronbach,s Alph Value		Note
Perception	Expectation	Reliable
0,991	0,991	

After the servqual variable is declared valid and reliable, calculate the servqual gap value between perceptions and expectations of each variable. The results of the servqual value calculation are presented in Table 5.

Table 5 Servqual Score Calculation

No	Code	Mean Value		Gap	No	Code	Mean value		Gap
		Preception	Expectation				Preception	Expectation	
1	T1	4,10	4,20	-0,10	11	RS3	4,22	4,20	0,02
2	T2	4,05	4,12	-0,07	12	RS4	4,23	4,17	0,06
3	T3	3,98	4,08	-0,10	13	A1	4,37	4,32	0,05
4	T4	4,23	4,28	-0,05	14	A2	4,37	4,32	0,05
5	RL1	4,28	4,22	0,07	15	A3	4,33	4,22	0,11
6	RL2	4,37	4,28	0,09	16	A4	4,30	4,18	0,12
7	RL3	4,30	4,20	0,10	17	E1	4,35	4,35	0
8	RL4	4,30	4,20	0,10	18	E2	4,33	4,27	0,06

9	RS1	4,27	4,28	-0,01	19	E3	4,10	4,17	-0,07
10	RS2	4,33	4,27	0,06	20	E4	4,17	4,20	-0,03

Based on the results of calculating the servqual value in Table 5. It can be seen that from the calculation of the servqual gap value between perceptions and expectations of 20 servqual variables, seven variables have a negative servqual gap, including variables: T1 (Real existence of the event) of -0.10, T2 (Event prizes as specified) of -0.07, T3 (Transparency in assessment) of -0.10, T4 (The existence of promotions carried out) of -0.05, RS1 (Employee speed in service) of -0.01, E3 (Provide feedback to participants) of -0.07, and E4 (Receive complaints, suggestions and criticism from participants) of -0.03. This gap occurs because the company has not been able to meet customers' expectations.

Because the company has never conducted a servqual assessment before, it sets its own servqual gap value standard of -0.02 for each variable. If the value is more significant than this value, the company needs to evaluate it. From the standard set by the company, six servqual variables must be evaluated and improved. When viewed from each servqual dimension, the following values are obtained:

Table 6 Servqual Gap Value for Each Dimension

No	Dimension	Preception	Expectation	Gap
1	Tangibles	4,09	4,17	-0,08
2	Reliability	4,31	4,23	0,08
3	Responsiveness	4,26	4,23	0,03
4	Assurance	4,34	4,26	0,08
5	Empathy	4,24	4,25	-0,01

Based on the results of Table 6, it can be seen that the tangibles dimension and the empathy dimension get negative sevqual scores, which require service improvements in these dimensions.

CSI Data Processing

After performing servqual calculations, which focus on each variable, calculations are carried out using the CSI method to determine overall customer satisfaction. The results of calculations using the CSI method can be seen in Table 7.

Table 7 CSI Method Results

No	Kode	MIS Preception	MSS Expectation	WF	WS
1	T1	4,10	4,20	4,82	20,24
2	T2	4,05	4,12	4,76	19,61
3	T3	3,98	4,08	3,98	16,23
4	T4	4,23	4,28	4,97	21,27
5	RL1	4,28	4,22	5,03	21,22
6	RL2	4,37	4,28	5,14	21,99
7	RL3	4,30	4,20	5,06	21,25
8	RL4	4,30	4,20	5,06	21,25
9	RS1	4,27	4,28	5,02	21,48
10	RS2	4,33	4,27	5,09	21,73
11	RS3	4,22	4,20	4,96	20,83
12	RS4	4,23	4,17	4,97	20,72
13	A1	4,37	4,32	5,14	22,20
14	A2	4,37	4,32	5,14	22,20
15	A3	4,33	4,22	5,09	21,47
16	A4	4,30	4,18	5,06	21,15
17	E1	4,35	4,35	5,11	22,22
18	E2	4,33	4,27	5,09	21,73
19	E3	4,10	4,17	4,82	20,09
20	E4	4,17	4,20	4,90	20,58
Total		84,98	84,53	99,21	
Weight Total (WT)					419,46
Customer Satisfaction Index (CSI)					84,56

$$CSI = \frac{419,46}{5 \times 99,21} \times 100\% = 84,56\%$$

Based on Table 7, the results of the calculation using the CSI method obtained a value of 84,56%. As seen from the standard satisfaction index table in Table 2, this value is in the range of 81%—100%, so it is stated that customers are "Very Satisfied" with the overall service provided by PT Sela Kontes Produksi.

Because the company has never conducted an overall assessment of services, it sets its own assessment standard of 70%—80%. These results mean that the company can provide good service overall because it has passed the target it has set.

IPA Data Processing

Next, a Cartesian diagram is created to connect the customer's satisfaction level or perception with the customer's expectation level. This process positions each variable in each service dimension. The importance performance analysis processing results are presented in Figure 3.

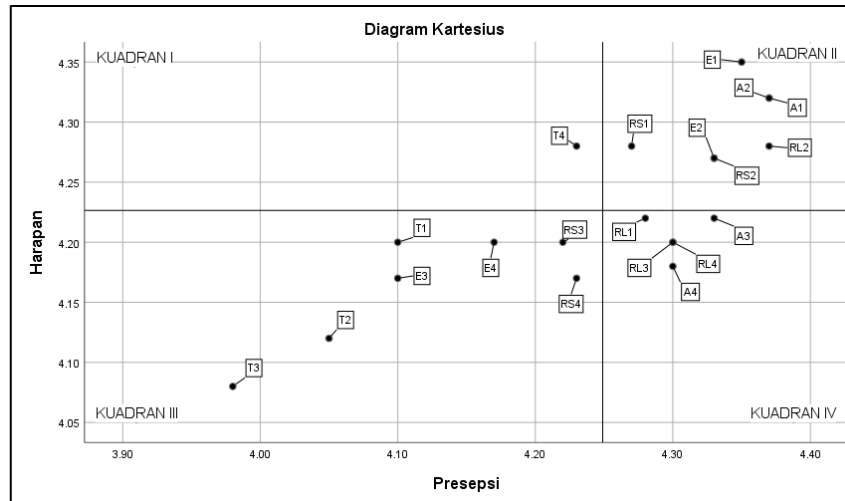


Figure 3 Cartesian Diagram Result

Based on Figure 3, it is known that there are 4 quads with variable distribution of each research variable. The following is an explanation of the distribution of variables in the 4 IPA quadrant:

- 1) In quadrant I, there is 1 variable: the existence of promotions carried out (T4). Quadrant I is a variable prioritized for improvement and must be done immediately.
- 2) In the second quarter, there are seven variables: Clarity of employees in conveying information (RL2), Employee speed in service (RS1), Providing the right information needed (RS2), Friendliness and courtesy (A1), Security in making transactions (A2), Employees being easy for participants to contact (E1), and always putting the interests of the participants first (E2). Quadrant II is a variable that must be maintained as it has a high performance and importance level.
- 3) There are 7 variables in the third quarter, namely, Real existence of the event (T1), Event prizes as specified (T2), Transparency in assessment (T3), Respond to customer complaints appropriately (RS3), Employees can resolve customer complaints (RS4), Provide feedback to participants (E3), Receive complaints, suggestions and criticism from participants (E4). Quadrant III is a Quadrant that is considered normal and less important and its performance is still lacking.
- 4) In quadrant IV, there are 5 variables Namely, Employees provide services on time (RL1 The ability of employees to answer questions clearly and easily understood (RL3), Convenience when making payments (RL4), Staff foster a sense of trust in participants (A3), Employee skills in service (A4). This Quadrant IV has a high level of performance, but its existence is not considered at all.

Conclusion

From the results of research conducted using Servqual, CSI, and IPA methods, it can be seen that 7 service variables still need to be improved including Real existence of the event (T1), Event prizes as specified (T2), Transparency in assessment (T3), The existence of promotions carried out (T4), Employee speed in service (RS1), Provide feedback to participants (E3), and Receive complaints, suggestions and criticism from

participants (E4) who received negative servqual scores. From the calculation through CSI, the service at PT. Sela Kontes Produksi is said to be very satisfying with a CSI value of 84.56%. In the analysis using IPA, there is 1 variable that is in quadrant 1 of the Cartesian diagram, namely the variable The existence of promotions carried out (T4), this is the top priority for immediate improvement by PT Sela Kontes Produksi.

Similar to the research of S. Oktamala and Eva Zuraidah (2021), this study confirms that it is necessary to improve the quality of the gap between perceptions and expectations and maintain service variables that were carried out well in the second quarter because the more optimal the quality of service provided, the more customer satisfaction will increase on the services that have been received.

Practical implications for PT Sela Kontes Produksi, namely: improving the quality of 7 negative variables can maximize the quality of customer service, increasing the variable attributes identified in quadrant I IPA has the potential to increase the level of participation of participants in the event, and to strengthen the brand image of the children's photo competition event. Therefore, PT Sela Kontes Produksi is advised to improve 7 service variables that are still unsatisfactory, especially the variable the existence of promotions carried out (T4), which is a priority for improvement, and it is hoped that PT Sela Kontes Produksi can maintain and maintain the overall quality of service that is very satisfying.

Future research is expected to provide further solutions related to proposals or improvements for customer satisfaction services, such as integrating this research using solution methods such as TRIZ or QFD.

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