Analysis of the Customer Satisfaction Index for Services and Determining Service Indicator Priorities Using the Analytical Hierarchy Process at the Surabaya District Court

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Abstract: Court service is one of the public services needed by the community. Public services at the courts are often complained by the public regarding unsatisfactory services. One of the efforts that must be made is to conduct a Community Satisfaction Survey on court service users with the aim of measuring community satisfaction as service users and improving the quality of public service delivery in the Courts. This study aims to analyze the satisfaction of the community using court services and analyze the order of priority service indicators for the Surabaya District Court using the Customer Satisfaction Index, Importance Performance Analysis, and Analytical Hierarchy Process methods. Based on filling out the questionnaire by 130 respondents, a CSI value of 87.5292% was obtained, which means that the public who use court services are very satisfied with the service. Furthermore, based on the results of the IPA analysis, it was found that 4 service attributes were a top priority and needed to be improved. Based on the results of AHP analysis with a sample of 5 respondents, it shows that the priority order of service indicators based on dimensions is the reliability dimension.

Keywords: *Service, Customer Satisfaction Index (CSI), Importance Performance Analysis (IPA), Analytical Hierarchy Process (AHP)*

1. Introduction

Public Service or Public Service is the provision of services by the government, the private sector on behalf of the government and the private sector to the community with or tokens of payment to meet the needs and interests of the community (Hardiansyah, 2011). One of the public services needed by the community is court services. Judicial Institution as a place to seek justice for every citizen. Public services at the courts are often complained by the public regarding court services that are not on schedule, inadequate facilities, unresponsiveness in service and other problems that come directly from the community. Aspects of public service in the courts and cases of complaints like this do not only occur in one court.

One of the efforts that must be made in improving court services is conducting a Community Satisfaction Survey on court service users with the aim of measuring community satisfaction as service users and improving the quality of public service delivery in the Courts.

In analyzing, researchers used the method of Customer Satisfaction Index, Importance Performance Analysis, and Analytical Hierarchy Process. The Customer Satisfaction Index (CSI) is a good measure of satisfaction because it summarizes the user's or consumer's assessment of various service attributes in a single score. The more accurate the selection of attributes, the more accurate the measure of overall satisfaction (Eboli and Mazzulla, 2009). In addition, there is the AHP method which is a method for sorting decision alternatives and choosing the best one with several criteria. AHP develops a numerical value to rank each decision alternative, based on the extent to which each alternative meets the decision maker's criteria (Taylor, 2014).

Based on the background presented, the author wants to conduct research entitled "Analysis of the Customer Satisfaction Index for Services and Determining Service Indicator Priorities Using the Analytical Hierarchy Process at the Surabaya District Court".

2. Methods and materials:

2.1 Data

The data source used in this study is primary data obtained by conducting a survey of justice seekers and users of court services at the Surabaya District Court. The survey was conducted by distributing questionnaires, the provisions of which are in Appendix 1 and interviewing respondents, namely justice seekers and users of court services at the Surabaya District Court in January 2023 - March 2023.

2.2 Data Collection Techniques

The data collection technique in this study used purposive sampling because this technique is effective and in accordance with the purpose of sampling. The distribution of questionnaires was carried out intentionally to users of court services at the Surabaya District Court. Determination of the number of sample in this study is as follows.

$$n = \frac{1.96^2.(0.5).(0.5)}{0.09^2} = 118,567 \approx 119$$

Based on the above calculation, the minimum sample size required in this study was 119 respondents.

3.3 Research Variable

Table 1. Research variable

Dimensions	Attribute	Attribute
Tangibles	$Z_{1.1}$	Comfortable and clean waiting room

	$Z_{1.2}$	Adequate and secure parking is available
	$Z_{1.3}$	There is an adequate information center
	$Z_{1.4}$	Neat appearance of officers
	$Z_{1.5}$	There are clean toilets
	$Z_{1.6}$	The Surabaya District Court Room/Environment is Clean and Neat
Reliability	$Z_{2.1}$	Officers are competent in providing services
	$Z_{2.2}$	Ease of service procedures
	$Z_{2.3}$	The ability of officers to provide information to the public in a language that is polite and easy to understand
	$Z_{2.4}$	The speed of officers in providing services
	$Z_{2.5}$	Compatibility of the requirements requested with the type of service
	$Z_{2.6}$	Cost appropriateness for court service proceedings
Responsiveness	$Z_{3.1}$	Officers respond to every community who wants to carry out services.
	$Z_{3.2}$	Transparent and accountable in serving the community
	$Z_{3.3}$	Officers have good communication skills
	$Z_{3.4}$	Accuracy of implementation of the court time schedule.
	$Z_{3.5}$	The speed of officers in responding to consumer needs
Assurance	$Z_{4.1}$	Officers provide services in accordance with the type of service.
	$Z_{4.2}$	Officers have good knowledge of court service mechanisms.
	$Z_{4.3}$	Officers have ethics in providing services
Empathy	$Z_{5.1}$	Officers are able to direct service users who do not understand the flow of court services.
	$Z_{5.2}$	Officers provide services regardless of social status
	$Z_{5.3}$	Officers understand the needs / desires of service users

To conduct this research, the following data analysis steps were carried out:

1. Conduct Data Feasibility Tests using Validity and Reliability Tests.
2. Analyze the level of satisfaction of the people who use the services of the Surabaya District Court based on the Customer Satisfaction Index (CSI) with the following steps:
   a. Determining the Mean Importance Score (MIS)
   b. Calculating Weight Factors (WF)
   c. Calculating the Mean Satisfaction Score (MSS)
   d. Calculating Weight Score (WS)
   e. Calculating the Customer Satisfaction Index (CSI)
3. Analyze the factors of community satisfaction using the services of the Surabaya District Court which need to be improved and maintained using Importance Performance Analysis (IPA) with the following steps:
   a. Calculates the average per factor from the reality and expectation columns $(X)(Y)$ so that is obtained $(\bar{X})$ And $(\bar{Y})$.
   b. Calculating the average to get the limits of and $(\bar{\bar{X}})(\bar{\bar{Y}})$.
   c. Make a Cartesian diagram plot using IBM SPSS 21 software.
   d. Make an interpretation of the Cartesian diagram based on the results by looking at the variables included in quadrants I, II, III, and IV.
4. Analyzing the priority order of service indicators that need to be improved by the Surabaya District Court using the Analytical Hierarchy process (AHP) with the following steps:
   a. Problem Decomposition
   b. Matrix Preparation and Consistency Test
   c. Synthesis of priorities
   d. decision making

3. Results and Discussion:

3.1 Validity Test
Validity test is used to measure the legitimacy of a questionnaire.

A. Tangible Dimension

Tabel 2 . Validity Tes on the Tangible Dimension

Attribute	*p-values*	Decision	Conclusion
$Z_{1.1}$	0,000	Reject H_0	Valid
$Z_{1.2}$	0,000	Reject H_0	Valid
$Z_{1.3}$	0,000	Reject H_0	Valid
$Z_{1.4}$	0,000	Reject H_0	Valid
$Z_{1.5}$	0,000	Reject H_0	Valid
$Z_{1.6}$	0,000	Reject H_0	Valid

B. Reliability Dimension

Tabel 3 . Validity Tes on the Reliability Dimension

Attribute	*p-values*	Decision	Conclusion
$Z_{2.1}$	0,000	Reject H_0	Valid
$Z_{2.2}$	0,000	Reject H_0	Valid
$Z_{2.3}$	0,000	Reject H_0	Valid

$Z_{2.4}$	0,000	Reject H_0	Valid
$Z_{2.5}$	0,000	Reject H_0	Valid
$Z_{2.6}$	0,000	Reject H_0	Valid

C. Responsiveness Dimension
Tabel 4. Validity Tes on the Responsiveness Dimension

Attribute	*p-values*	Decision	Conclusion
$Z_{3.1}$	0,000	Reject H_0	Valid
$Z_{3.2}$	0,000	Reject H_0	Valid
$Z_{3.3}$	0,000	Reject H_0	Valid
$Z_{3.4}$	0,000	Reject H_0	Valid
$Z_{3.5}$	0,000	Reject H_0	Valid

D. Assurance Dimension
Tabel 5. Validity Tes on the Assurance Dimension

Attribute	*p-values*	Decision	Conclusion
$Z_{4.1}$	0,000	Reject H_0	Valid
$Z_{4.2}$	0,000	Reject H_0	Valid
$Z_{4.3}$	0,000	Reject H_0	Valid

E. Emphaty Dimension
Tabel 5. Validity Tes on the Emphaty Dimension

Attribute	*p-values*	Decision	Conclusion
$Z_{5.1}$	0,000	Reject H_0	Valid
$Z_{5.2}$	0,000	Reject H_0	Valid
$Z_{5.3}$	0,000	Reject H_0	Valid

3.2 Reliability Test

The reliability test is used to determine whether a person's answers to the questionnaire are consistent or stable from time to time (Ghozali, 2012). A variable is said to be reliable if it gives a Cronbach Alpha value (Ghozali, 2012). Cronbach Alpha > 0,6 the results of the reliability test are presented in Table 6 below:

Tabel 6. Reliability Test

Variable	*Cronbach's Alpha*	Conclusion
Tangible	0,622	High Reliability
Reliability	0,633	High Reliability
Responsiveness	0,610	High Reliability
Assurance	0,655	High Reliability
Emphaty	0,707	High Reliability

3.3 Customer Staisfaction Indeks (CSI)

The measurement of the Customer Satisfaction Index was carried out to determine the satisfaction index of Surabaya District Court service users and to be used as a reference for establishing a specific strategy to maintain and increase service satisfaction at the Surabaya District Court. The CSI calculation results based on are as follows:

A. Mean Importance Score (MIS)

$$MIS_j = \frac{\sum_{i=1}^{n} Y_{ij}}{n} ; j = 1,2, \dots ,23 ; i = 1, 2, \dots , 130$$

$$MIS_1 = \frac{\sum_{i=1}^{130} Y_{i1}}{130} = \frac{5 + 4,9 + \cdots + 4,8}{130} = 4,7562$$

$$\vdots$$

$$MIS_{23} = \frac{\sum_{i=1}^{130} Y_{i23}}{130} = \frac{4,8 + 4,7 + \cdots + 4,5}{130} = 4,7515$$

B. Weight Factors (WF)

$$WF_j = \frac{MIS_j}{\sum_{r=1}^{p} MIS_r} \times 100\%; j = 1, 2, \dots , 23$$

$$WF_1 = \frac{MIS_1}{\sum_{r=1}^{23} MIS_r} \times 100\%$$

$$= \frac{4,7562}{4,7562 + 4,7485 + \cdots + 4,7515} \times 100\%$$

$$= 4,3602$$

$$\vdots$$

$$WF_{23} = \frac{MIS_{23}}{\sum_{r=1}^{23} MIS_r} \times 100\%$$

$$= \frac{4,7515}{4,7562 + 4,7485 + \cdots + 4,7515} \times 100\%$$

$$= 4,3560$$

C. Mean Satiisfaction Score (MSS)

$$MSS_j = \frac{1}{n} \sum_{i=1}^{n} X_{ij} ; j = 1,2, \dots ,23$$

$$MSS_1 = \frac{1}{n} \sum_{i=1}^{130} X_{i1} = \frac{1}{130}(4,8 + 4,8 + \cdots + 4)$$

$$= 4,3731$$

$$\vdots$$

$$MSS_{23} = \frac{1}{n} \sum_{i=1}^{n} X_{i23} = \frac{1}{30}(4,5 + 4,2 + \cdots + 4) = 4,3669$$

D. Weight Score (WS)

$$WS_j = WF_j \times MSS_j$$
$$WS_1 = WF_1 \times MSS_1$$
$$= 4,3602 \times 4,3731$$
$$= 19,0677$$
$$WS_2 = WF_2 \times MSS_2$$
$$= 4,3532 \times 4,3562$$
$$= 18,9632$$
$$\vdots$$
$$WS_{23} = WF_{23} \times MSS_{23}$$
$$= 4,3560 \times 4,366$$
$$= 19,0224$$

Tabel 7. Calculation results of Customer Satisfaction Index

j	Attribute	MIS_j	WF_j	MSS_j	WS_j
1	$Z_{1.1}$	4,7562	4,3602	4,3731	19,0677
2	$Z_{1.2}$	4,7485	4,3532	4,3562	18,9632
3	$Z_{1.3}$	4,7785	4,3807	4,4331	19,4200
4	$Z_{1.4}$	4,7615	4,3652	4,5262	19,7575
5	$Z_{1.5}$	4,6438	4,2573	4,1685	17,7463

6	$Z_{1.6}$	4,7669	4,3701	4,4023	19,2386
7	$Z_{2.1}$	4,7846	4,3863	4,4731	19,6204
8	$Z_{2.2}$	4,7446	4,3497	4,3454	18,9010
9	$Z_{2.3}$	4,7562	4,3602	4,4400	19,3595
10	$Z_{2.4}$	4,6792	4,2897	4,2308	18,1488
11	$Z_{2.5}$	4,7269	4,3334	4,2862	18,5738
12	$Z_{2.6}$	4,7685	4,3715	4,3808	19,1507
13	$Z_{3.1}$	4,6923	4,3017	4,3554	18,7356
14	$Z_{3.2}$	4,7331	4,3391	4,3846	19,0252
15	$Z_{3.3}$	4,7054	4,3137	4,3877	18,9272
16	$Z_{3.4}$	4,7285	4,3349	4,3085	18,6766
17	$Z_{3.5}$	4,7677	4,3708	4,4038	19,2484
18	$Z_{4.1}$	4,7746	4,3772	4,4231	19,3606
19	$Z_{4.2}$	4,7369	4,3426	4,3562	18,9171
20	$Z_{4.3}$	4,7608	4,3645	4,4154	19,2708
21	$Z_{5.1}$	4,7400	4,3454	4,4069	19,1500
22	$Z_{5.2}$	4,7738	4,3765	4,4246	19,3642
23	$Z_{5.3}$	4,7515	4,3560	4,3669	19,0224
					437,6454

$$Customer\ Satisfaction\ Index\ (CSI) = \frac{437,6458}{5} = 87,5291\%$$

Based on Table 7 the results of the calculation of the Customer Satisfaction Index (CSI) obtained a value equal to 87,5291% which the value is in the "81% − 100%" interval, which means that the community using court services at the Surabaya District Court is very satisfied with the services at the Surabaya District Court as a whole. Thus the Surabaya District Court needs to maintain the quality of service at the Surabaya District Court.

3.4 Importance Performance Analysis (IPA)
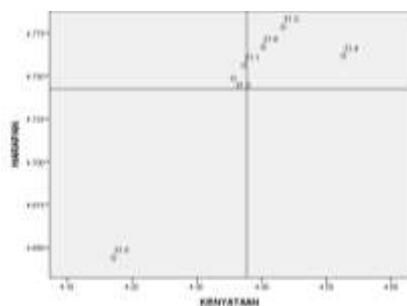
A. Tangible Dimension

Figure 1. Importance Performance Analysis on the Tangible Dimension

Based on Figure 1, attributes $Z_{1.1}$ and $Z_{1.2}$ are top priority and need to be improved.
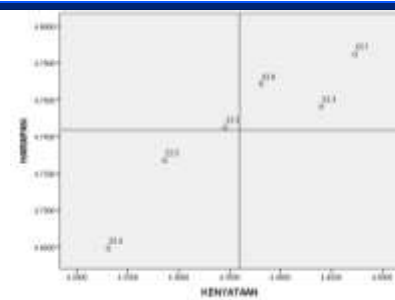
B. Reliability Dimension

Figure 2. Importance Performance Analysis on the Reliability Dimension

Based on Figure 2, attributes $Z_{2.2}$ are top priority and need to be improved.

C. Responsiveness Dimension

Figure 3. Importance Performance Analysis on the Responsiveness Dimension

Based on Figure 3, attributes $Z_{3.4}$ are top priority and need to be improved.
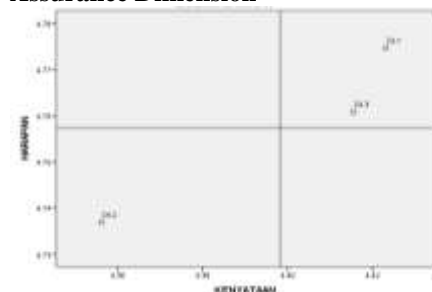
D. Assurance Dimension

Figure 4. Importance Performance Analysis on the Assurance Dimension
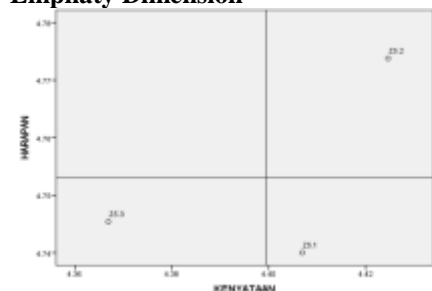
E. Emphaty Dimension

Figure 5. Importance Performance Analysis on the Emphaty Dimension

3.5 Analytical Hierarchy Process

AHP is a decision support model that will describe complex multi-factor or multi-criteria problems into a hierarchy (Saaty, 1993). The AHP method can consider the relative priority of the factors in the system so that people are able to choose the best alternative based on their goals.

The final results of data processing based on the Analytical Hierarchy Process (AHP) method using Software Expert Choice 11 are as follows:

Table 8. Priority Weight for Each Dimension

Dimensions	Priority Weight	Order Priority
Reliability	0,417	1
Responsiveness	0,202	2
Guarantee	0,192	3
Attention	0,136	4
Physical View	0,053	5

Based on Table 8, the highest priority weight was obtained for improving the quality of service at the Surabaya District Court, namely the reliability dimension with a value of 0,417.

4. Conclusion:

Based on the Customer Satisfaction Index (CSI) obtained a value equal to 87,5291%, which means that the community using court services at the Surabaya District Court is very satisfied with the services at the Surabaya District Court as a whole. Based on the Importance Performance Analysis, there are 4 attributes that are a top priority and need to be improved and reliability dimension the highest priority weight was obtained for improving the quality of service at the Surabaya District Court

5. References

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