

The influence of service quality and brand image on customer satisfaction at CCTV Palace Medan

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Article Info	ABSTRACT
Keywords: Service Quality, Brand Image, Customer Satisfaction	The study was conducted to test and analyze the influence on service quality and brand image on customer satisfaction at Istana CCTV Medan. The research used a quantitative research approach, while this type of research is a quantitative associative study. The research population were 355 customers and the research samples consisted of 78 customers, drawn by using simple random sampling techniques. The research data were analyzed using multiple linear regression methods and classical assumption testing. Partially, the results on study showed that service quality and brand image had a positive and significant effect on customer satisfaction at Istana CCTV Medan. Simultaneously, service quality and brand image have a positive and significant effect on customer satisfaction at Istana CCTV Medan. The value on adjusted R ² was 0,626, meaning that the variable variation in customer satisfaction can be explained by the two independent variables up to 62.6% and the remaining 37.4% can be explained by other variables
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INTRODUCTION

Istana CCTV Medan is a company that sells CCTV products. The camera products sold are under the Hikvision brand, located on Jalan Brigjen Katamso No. 353A-353B, Sei Mati Village, Medan. The products offered by Istana CCTV apart from CCTV cameras are: alarms, access doors, fingerprint attendance machines, and many other products. With a variety of products on offer, customers can choose the products they want to buy according to their needs. Service quality is defined as a measure of how well the level of service provided meets customer expectations[1]. In this case, the quality of service at Istana CCTV is considered not yet optimal because there are still complaints, including prices not being in line with customer expectations, the goods being sought are empty or not for sale, not responding quickly to questions from consumers/customers, delays in work/customer service schedules and making customers/consumers wait a long time.

Brand image is a representation of the overall perception of a brand and a form of information and past experiences with that brand[2]. One of the products discussed is

Hikvision camera products, because Hikvision products and brands are the products that are best known and recognized by the public. Even though Hikvision products are well known, there are also customers and consumers who do not choose Hikvision camera products because the price is more expensive compared to other camera products.

Customer satisfaction can be interpreted as a comparison between hopes or expectations before purchase and perceptions of performance after purchase[3]. In order to increase consumer satisfaction, companies must be able to provide quality service. The factors that influence service quality are: 1) Employees' ability to provide services; 2) Company management patterns; 3) Human resource development; 4) Harmony of work relationships; 5) Employee work motivation; 6) Incentive policy[4]. Customers do not buy at Istana CCTV Medan because the product they are looking for is not sold or the price offered is not in line with the customer's wishes and also because work delays often occur so that customers feel dissatisfied and move elsewhere. Indicators of customer satisfaction are: meeting customer expectations, always using the product, recommending to others, service quality, loyalty, good reputation, and location[5].

Service quality can be defined as focusing on meeting needs and requirements, as well as on timeliness to meet customer expectations[6]. Service Quality Indicators consist of: direct evidence (tangibles), which includes physical facilities, employee equipment and communication facilities, reliability, namely the ability to provide promised services immediately, accurately and satisfactorily, responsiveness, namely The staff's desire to help consumers, and provide responsive service, assurance, which includes knowledge, ability, politeness and trustworthiness, empathy, which includes ease in carrying out good communication relationships, attention and understanding. customers' needs[7].

A brand is a buyer's ability to recognize or remember that a brand is part of a particular product category[8]. Brand image is also the perception and belief held by consumers, as reflected by the associations embedded in the customer's memory, which are always remembered first when they hear the slogan and are embedded in the consumer's mind.[9]. The level of consumer satisfaction and disappointment can be seen from satisfaction with a product. It is said that brand image can change consumer expectations with lower brand image expectations than consumer perceptions, the better the perception in consumers' minds of the product image.[10]. This brand image indicator consists of: The user's impression of the company that produces the goods or services, the user's impression of the user of the product, including the user's outlook on life and social position, the user's impression of the product, including its attributes, uses, consumers and guarantees. given goods or products and user impressions of celebrities who endorse goods or products advertising[11].

METHOD

The population in this study were Istana CCTV customers from January to December 2021. The sample used was 78 people using the Simple Random Sampling technique. This research was conducted from February to May 2023. Population is a generalized area

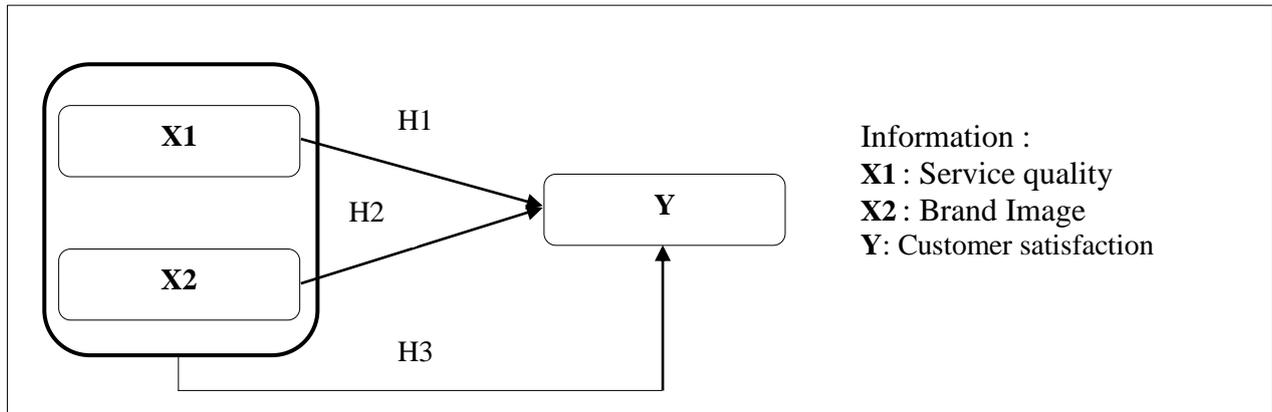
consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn.[12]. In this study, the population was 355 people. The sample is part of the number and characteristics of the population[12].The method used to collect data is by using a questionnaire method. This questionnaire was distributed to customers of Istana CCTV Medan who purchased from January to December 2021. To measure perceptions and opinions in this research, researchers used a Likert Scale. The Likert scale is used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena[13]. The value of each answer to this statement can be seen in the table below.

Table 1 Score Measurement

Statement	Weight
Strongly agree	5
Agree	4
Doubtful	3
Don't agree	2
Strongly disagree	1

Table 2 Variable indicators

Variable	Indicator	Question No
Service quality (X1)	1. Reliability	1-10
	2. Responsiveness	
	3. Guarantee (assurance)	
	4. Empathy	
	5. Physical Evidence (tangibles)	
Brand Image (X2)	1. The user's impression will be companies that produce goods and services	11-18
	2. The user's impression will be The user of the product includes the user, outlook on life and social position	
	3. The user's impression will be Goods include attributes, uses, consumers and guarantees provided by goods or products	
Customer satisfaction (Y)	1. Fulfillment of hopes customer	19-32
	2. Always use product	
	3. Recommend to others	
	4. Service Quality	
	5. Loyalty	
	6. Good Reputation	
	7. Location	



Picture 1 Research Model

The testing stages in this research went through several stages[14],The first is that the validity of the statement is tested, where the statement is valid or not if it can reveal the questionnaire. The second step is to carry out a reliability test to find out whether it can be relied upon or trusted. Third is the normality test which is to determine the normality of the data distribution. Fourth is the multicollinearity test, the aim of which is to determine whether there is an independent correlation. The fifth is the heteroscedasticity test, the aim of which is to test whether in a regression model there is inequality of variance from the residuals of one observation to another observation. Sixth is the linearity test, the aim of which is to find out whether the two variables have a significant linear relationship or not. Seventh is a correlation test whose aim is todetermine the strength of the relationship between the correlation of the two variables where other variables that are considered influential are controlled or made constant (as control variables). Eightht-test where the aim is to determine the influence of service quality variables on job satisfaction and brand image on customer satisfaction. Next is the F-test whose aim is to determine the level of relationship between service quality variables and brand image on customer satisfaction. The final step taken was the coefficient of determination test R, the aim of which was to determine the level of influence between the variables of service quality and brand image on customer satisfaction at Istana CCTV.

RESULTS AND DISCUSSION

Respondent Characteristics

Respondent characteristics are explained regarding descriptive data obtained from respondents. This data is displayed so that the profile of the respondent clearly shows the relationship between the related variables in this research. This questionnaire was distributed to 78 Istana CCTV customers who purchased from January to December 2021.

By Gender

Characteristics of respondents based on gender

No	Gender	Number of people)	Percentage (%)
1.	Man	43	55.1
2.	Woman	35	54.9
	Amount	78	100

Most of the respondents were surpassed by men at 55.1% or 43 people, then female respondents at 54.9% or 35 people with a total of 78 male and female respondents.

Based on Age

Respondent characteristics based on age

No	Age	Number of people)	Percentage (%)
1.	20-35	38	48.8
2.	36-50	30	38.4
3.	Above 50	10	12.8
	Amount	78	100

The table above shows that the age of the majority of respondents is dominated by 20-35 years, namely 48.8% or 38 people, where this age level is of productive age and has sufficient income to buy CCTV products. Then followed by those aged 36-50 years at 38.4% or 30 people and then those aged over 50 years at 12.8% or 10 people.

Purchase Frequency

Characteristics of respondents by purchasing frequency

No	Purchase Frequency	Frequency (person)	Percentage (%)
1.	1	35	44.9
2.	2-4	40	51.2
3.	> 5	3	3.9
	Amount	78	100

The table above shows that the majority of respondents bought once, 44.9% or 35 people. Then the most frequent purchases were 2-4x, amounting to 51.2% or 40 people because the purchase of CCTV products was tailored to their needs and was long-lasting. Then followed by the frequency of purchases >5 at 3.9% or 3 people.

Validation and Reliability Test Results

Validation Test Results

Based on the results validity test, the calculated r results obtained from all statements were in the range 0.369-0.863 where $n = 30$ with an α level of 0.05, obtained r table = 0.223. The value (r -count) for the service quality variable is in the range 0.402-0.863, in other words, all 10 statements are valid, the brand image variable is between 0.375-0.792, in other words, all 8 statements are valid, and then the customer satisfaction variable is between 0.369- 0.755, meaning that all 14 statements are valid. This concludes that the statement can be used for the next test process.

R Test Results.reliability

Reliability testing functions to see the consistency and stability of a measurement scale. As for the reliability test criteria, if the Cronbach's Alpha value is > 0.60 , then the questionnaire items are reliable

Reliability Test Results

Variable	Number of Statements	Cronbac Limits. <i>h</i> <i>Alpha</i>	Cronbach's Alpha	Information
Service Quality (X1)	10	0.6	0.843	Reliable
Brand Image (X2)	8	0.6	0.761	Reliable
Customer Satisfaction (Y)	14	0.6	0.863	Reliable

Normality test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		78
Normal Parameters, b	Mean	.0000000
	Std. Deviation	3.50880186
	Most Extreme Differences	
	Absolute	,045
	Positive	,045
	negative	-.044
Statistical Tests		,045
Asymp. Sig. (2-tailed)		,200c,d

- Test distribution is Normal.
- Calculated from data.
- Lilliefors Significance Correction.
- This is a lower bound of the true significance.

From the output above, it can be seen that the significance value is 0.200 ($0.200 > 0.05$), so it can be concluded that the sample data on service quality (X1), brand image (X2) and customer satisfaction (Y) are normally distributed.

Test Thy.ticolinearity

Multicol Results.inierity

Model	Unstandardized Coefficients		Standardized Coefficients	Collinearity Statistics			
	B	Std. Error	Beta	Q	Sig.	Tolerance	VIF
1 (Constant)	-.836	3,963		-.211	,834		

The influence of service quality and brand image on customer satisfaction at CCTV Palace

Medan– Hendry et.al

Service quality	,340	.127	,227	2,666	,009	,671	1,491
Brand_Image	1,034	.137	,645	7,572	,000	,671	1,491

a. Dependent Variable: Customer_Satisfaction

Based on the output above, it can be seen that in the regression model there are no symptoms of multicollinearity, because each independent variable (service quality and brand image) has a value of $VIF < 10$ and tolerance > 0.1 .

Heteros Test,drasticity

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	Q	Sig.
1 (Constant)	,657	2,469		,266	,791
Service quality	,051	,079		,091	,646
Brand_Image	.014	,085		.023	,164

a. Dependent Variable: Abs_RES

Based on the table above, it can be seen that the value is significantThe significance for service quality (X1) is $0.520 > 0.05$, which means that heteroscedasticity does not occur. Brand image (X2) is $0.870 > 0.05$, which means there is no heteroscedasticity.

Correlation Test Results

		Service quality	Brand_Image	Customer satisfaction
Service quality	Pearson Correlation	1	,574**	,597**
	Sig. (2-tailed)		,000	,000
	N	78	78	78
Brand_Image	Pearson Correlation	,574**	1	,775**
	Sig. (2-tailed)	,000		,000
	N	78	78	78
Customer satisfaction	Pearson Correlation	,597**	,775**	1
	Sig. (2-tailed)	,000	,000	
	N	78	78	78

** . Correlation is significant at the 0.01 level (2-tailed).

From the output above, the value can be knownThe Pearson correlation between the service quality variables (X1) and customer satisfaction (Y) is 0.597 and the Pearson correlation value between the brand image variable (X2) and customer satisfaction (Y) is 0.775. Two asterisks indicate that there is a strong relationship between the service quality variable (X1) and customer satisfaction (Y) and the brand image variable (X2) and customer

satisfaction (Y). A positive correlation value means that if service quality and brand image increase, customer satisfaction will also increase.

Multiple Linear Regression Test Results

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	Q	Sig.
1 (Constant)	-.836	3,963		-.211	,834
Service quality	,340	.127		,227	2,666 ,009
Brand_Image	1,034	.137		,645	7,572 ,000

a. Dependent Variable: Customer_Satisfaction

The table above shows the results of multiple linear regression

$$Y = a + b_1X_1 + b_2X_2$$

The explanation of this equation is as follows:

The meaning of this equation, the constant value is -0.836, which means that if there is no improvement in service quality and brand image, then the customer satisfaction value is -0.836. The coefficient of the service quality variable (X1) is 0.340, which means that every increase or increase of 1 unit of service quality will increase customer satisfaction by 0.340. The coefficient of the brand image variable (X2) is 1.034, which means that every increase or increase of 1 unit of brand image will increase customer satisfaction by 1.034.

T test (partial)

Partial test results

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	Q	Sig.
1 (Constant)	-.836	3,963		-.211	,834
Service quality	,340	.127		,227	2,666 ,009
Brand_Image	1,034	.137		,645	7,572 ,000

a. Dependent Variable: Customer_Satisfaction

The table above shows that the value is significantfiction of variableservice quality (X1) is 0.009 smaller than the al valuefa is 0.05. Thus it can be concluded that service quality has a significant influencefion customer satisfaction. Furthermore, the brand image variable (X2) has a significant valuefikan is 0.000 smaller when compared to the al valuefa is 0.05. Thus it can be concluded that brand image has a significant influencefion customer satisfaction

F test (simultaneous)

F sec test results, Simultaneous fig.

ANOVAa					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	1651.179	2	825,590	65,316	,000b
Residual	948,000	75	12,640		
Total	2599.179	77			

The influence of service quality and brand image on customer satisfaction at CCTV Palace

Medan– Hendry et.al

-
- a. Dependent Variable: Customer_Satisfaction
b. Predictors: (Constant), Brand_Image, Service_Quality
-

The table above shows that the value is significantfikan is 0.000 smaller than the alpha value of 0.05. Thus, it can be concluded that service quality and brand image jointly influence customer satisfaction.

Determinant Coefficient (R2)

Dete Testing, ermination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797a	.635	.626	3,555
a. Predictors: (Constant), Brand_Image, Service_Quality				

The table above shows that the R-Square value is 0,626 or equal to 62.6%. This means that service quality and brand image are able to influence customer satisfaction by 62.6%, and the remaining 37.4% is influenced by other variables that are not included in this research model.

Discussion

The results of data analysis from simultaneous tests and partial tests, it can be seen that the variables of service quality and brand image have a significant influence on customer satisfaction, as evidenced by the regression analysis test, where these findings are supported by the results of previous research, namely (Rahman, Andi Batari Muh. Jobhaar Bima Zainudin (2018)[15], Kusuma, Wijaya Marlana, Novi (2021)[16], Mahira Hadi, Prasetyo Nastiti, Hedi (2021)[17]), which both state that the variables of service quality and brand image have a positive influence on customer satisfaction. The magnitude of the influence of these two independent variables is 62.6% and the remaining 37.4% of customer satisfaction is influenced by other factors not examined in this research. There is a difference between previous research and this research, namely that in previous research the coefficient of determination of the two independent variables on the customer satisfaction variable exceeded 50%. Thus, it can be stated that there is a positive and significant influence between service quality and brand image on customer satisfaction at CCTV Palace, which can also prove the hypothesis of this research.

CONCLUSION

From the results of this research, the following conclusions were obtained: Partially, service quality has a positive and significant effect on customer satisfaction at Istana CCTV Medan. Partially, brand image has a positive and significant effect on customer satisfaction at Istana CCTV Medan. Simultaneously, service quality and brand image have a positive and significant effect on customer satisfaction at Istana CCTV Medan. The results of the coefficient of determination test show that 62.6% of the dependent variable customer satisfaction can be explained by the independent variables service quality and brand image, while the remaining 37.4% is explained by other variables such as price and product

The influence of service quality and brand image on customer satisfaction at CCTV Palace

Medan– Hendry et.al

quality.

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