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THE INFLUENCE OF THE ENVIRONMENT, TARIFFS AND FACILITIES ON THE SATISFACTION OF FLAT RESIDENTS UNDER THE MANAGEMENT OF BP BATAM WITH SERVICE QUALITY AS A VARIABLE INTERVENING

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Abstract:

This research analyzes the influence of Environment, Tariffs and Facilities Towards Satisfaction of Flat Residents Under the Management of Mr Batam with Service Quality as an Intervening Variable. Based on data from BP Batam in 2023, there are Kabil flats, 530 reports, yellow face flats with 613 reports, Batu Ampar flats with 610 reports, Sekupang flats with 487 reports, and Tanjung Uncang flats with 501 reports. This shows that there are still many flat residents who experience problems when inhabiting flats. Using primary data from 176 Flat Residents Under the Management of Mr Batam, this research found that Environment Nah has a direct significant effect on Flat Residents' Satisfaction, instead Rates and Facilities proven to have influence yang significant to Flat Residents' Satisfaction, additionally the Environment has an insignificant influence on Service Quality, but Trif and Facilities have a significant influence on Service Quality. Service Quality has a significant effect on the satisfaction of flat residents. The indirect influence of the environment has an insignificant influence on the satisfaction of flat residents through service quality, but rates and facilities have a significant influence on the satisfaction of flat residents through service quality. The proposed recommendation is to focus on scaling up the Flat environment and improving the quality of services provided to flat residents.

Keywords: Influence Satisfaction, Service Quality, Environment, Tariff, Facilities.

INTRODUCTION

The city of Batam, as one of the industrial cities that is very developed and offers a better life in Indonesia, is a magnet for job seekers from various regions to try their luck in the city. The flow of urbanization that occurs in the city of Batam is very massive from year to year. This has an impact on the very massive annual population growth spike in the city of Batam.

The impact of the population continues to increase in the city of Batam, which, of course, will raise new problems related to city settlements. A high population existing in the city center will further improve the need for livable housing for the residents; meanwhile, land availability in the area has limitations. So one of the government's efforts to solve the problem of housing needs for low-income people in dense urban areas is to build housing vertically, or flats.

In the city of Batam itself, currently, there are 5 flats that have been built by the BP Batam Concession Agency, which is then called BP Batam. These flats are spread across several places, especially in industrial areas in Batam City. The flats managed by BP Batam are: Kabil Flats, Yellow Face Flats, Batu Ampar Flats, Sekupang Flats and Tanjung Uncang Flats.



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The flats have a different number of rooms and have different facility types. Rooms include 21, 24, 27 and 36. The number of rooms in each flat also varies, including the following

Table 1. Data on the Number of Rooms for Each Flat

No	Flat Name	Number of Rooms
1	Kabil Flats	626
2	Yellow Face Flats	576
3	Batu Ampar Flats	256
4	Sekupang Flats	256
5	Tanjung Uncang Flats	192
Amount		1906

Source: BP Batam 2024

In managing the hamlet, BP Batam always provides the best service to satisfy the flat residents. From data obtained from BP Batam, several people have entered the flat management regarding the issue of flat facilities. For more clarity, see the following data.

Table 2. List of Complaint Reports by Flat Residents in 2023

No	Moon	Kabil Flats			Yellow Face Flats			Batu Ampar Flats			Sekupang Flats			Tanjung Uncang Flats		
		Complain t	Tar get	%	Co mp lai nt	Tar get	%	Com plain t	Tar get	%	Com plain t	Tar get	%	Com plain t	Tar get	%
1	January	32	65	49 %	40	65	62 %	52	65	80 %	52	65	80 %	25	65	38 %
2	Februar y	28	65	43 %	92	65	142 %	28	65	43 %	25	65	38 %	86	65	132 %
3	March	37	65	57 %	82	65	126 %	82	65	126 %	15	65	23 %	15	65	23 %
4	April	82	65	126 %	22	65	34 %	41	65	63 %	32	65	49 %	26	65	40 %
5	May	52	65	80 %	18	65	28 %	36	65	55 %	85	65	131 %	15	65	23 %
6	June	76	65	117 %	32	65	49 %	37	65	57 %	22	65	34 %	85	65	131 %
7	Julie	34	65	52 %	82	65	126 %	68	65	105 %	62	65	95 %	25	65	38 %
8	August	68	65	105 %	52	65	80 %	52	65	80 %	12	65	18 %	62	65	95 %
9	Sept	25	65	38 %	58	65	89 %	75	65	115 %	23	65	35 %	13	65	20 %
10	Oct	12	65	18 %	12	65	18 %	88	65	135 %	15	65	23 %	46	65	71 %
11	Nov	26	65	40 %	67	65	103 %	15	65	23 %	66	65	102 %	85	65	131 %

12	Dec	58	65	89 %	56	65	86 %	36	65	55 %	78	65	120 %	18	65	28 %
13	Amount	530	780	68 %	613	780	79 %	610	780	78 %	487	780	62 %	501	780	64 %

Source: BP Batam 2024

From the data above, it can be seen that Kabil flat has a number of reports or complaints from residents of Kabil flat, with a total of 530 or an average of –, an average of around 68 % of the complaint target set by BP Batam. Then the residents of the yellow-faced flat with 613 reports or an average of – average around 79 % every month from the complaint target set by BP Batam. Batu Ampar flat with 610 reports or an average of – averages around 78 % every month from the complaint target set by BP Batam, then Sekupang flat with 487 reports or an average of – averages around 62 % every month from the complaint target set by BP Batam and finally Tanjung Uncang flat with 501 reports or an average of – on average around 64 % every month from the complaint target set by BP Batam. From the data reported by flat residents related to damage to flat facilities, of course, this shows that there are many problems faced by flat residents, which can reduce the level of satisfaction of flat residents in continuing to live in the flat.

With lots of reports of complaints from flat residents every month against the flat facility issues managed by BP Batam. Therefore, this research aims to analyze the influence of the Environment, Tariffs and Facilities on the satisfaction of Flat Dwellers with Service Quality as an intervening variable.

1. How Environment direct influence against satisfaction of Flat Residents under BP Batam Management?
2. How Tariff direct influence against satisfaction of Flat Residents under BP Batam Management?
3. How do Facilities Directly Influence against Satisfaction of Flat Residents Under BP Batam Management?
4. How Environment direct influence service quality for Flat Residents Under the Management of BP Batam?
5. How Tariff direct influence against service quality of Flat Residents Under the Management of BP Batam?
6. How do Facilities Directly Influence Service Quality for Flat Residents Under the Management of BP Batam?
7. How Environment indirect influence against Satisfaction of Flat Dwellers through Service Quality for Flat Residents Under the Management of BP Batam?
8. How Tariff indirect influence against Satisfaction of Flat Dwellers through Service Quality for Flat Residents Under the Management of BP Batam?
9. How Facilities Indirectly Influence Satisfaction Flat Dwellers through Service Quality Flat Residents Under the Management of BP Batam?
10. How does Service Quality direct influence against Satisfaction of Flat Residents Under the Management of BP Batam?

METHODS

This research is a type of quantitative research using primary data, which is the answer to the questionnaire used. This method provides an accurate picture of the relationships between the variables studied by the researcher and makes it easier to process data using statistical tools. The object of this research focuses on the level of Satisfaction of flat residents under the Management of



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BP Batam. The population in this study was the whole Resident Flats under the management of BP Batam, totaling 1300 residents. Considering the relatively large population, the probability sampling technique using Slovin's formula and a margin of error is used 7%, so in a sample of 176 people. The data used in this study consisted of primary data and secondary data. The primary data in this study came from a questionnaire completed by respondents Resident Flats Under the Management of BP Batam. Secondary data in this research are obtained through agency reports or other public sources.

The data analysis technique in this research uses Partial Least Squares (PLS), which is a multivariate analysis in the second generation using structural equation modeling (Structural Equation Model/SEM). PLS can be used for small sample quantities, and of course, with large sample quantities, it will be better able to increase estimation precision. PLS does not require the assumption that the data distribution must be normal or not. Construct forms can use either reflective or formative models. The maximum number of indicators is also quite large, namely 1000 indicators.

RESULT AND DISCUSSION

Measurement Model (Outer Models). Analysis of measurement models (Outer Models) aims to evaluate the validity (accuracy) and reliability (reliability) of a construct of the variables studied, namely, among others: (1) Convergent Validity (Convergent Validity / Average Variance Extracted / AVE), and (2) Discrimination Validity (Discriminant Validity).

Convergent validity. It is the degree to which a measurement positively correlates with alternative measurements of the same construct. An indicator or statement item is considered valid or cannot be seen from the outer loading value of each item. If the outer loading value is >0.7 , then an indicator is valid, and vice versa; if the outer loading value is <0.7 , then the indicator is invalid (Jogiyanto, 2009). The results of the outer model test, which shows the outer loading value using Smart PLS, can be seen in Figure 4.6 below:

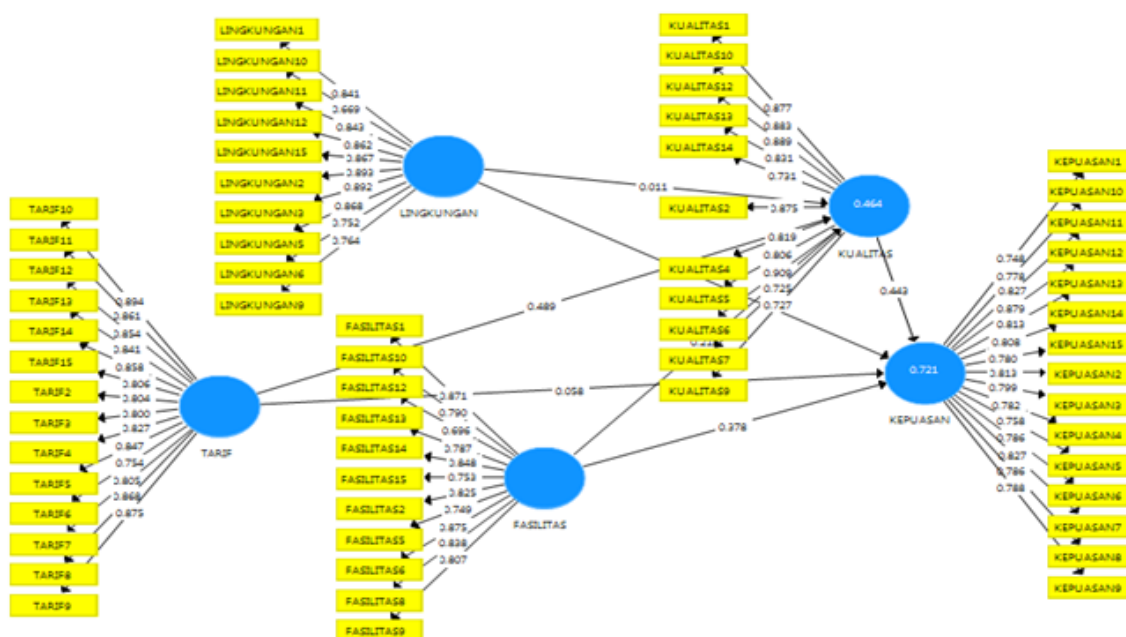


Figure 1. Outer Model Test Results

The image above shows that the entire variable has a value greater than 0.7, so it meets the criteria. Apart from that, the convergent validity test is seen from the value Average Variance Extracted (AVE). The variables in this study already had AVE values > 0.5 . The AVE values in the model can be found in Table 3 below.

Table 3. Value Average Variance Extracted (AVE)

Variable	Ave value
(X1) Environment	0.559
(X2) Rates	0.699
(X3) Facilities	0.575
(Z) Quality of Service	0.641
(Y) Resident Satisfaction	0.638

Source Data processed with SmartPLS 4 (2024)

Based on the value of outer loading and Average Variance Extracted (AVE), this research data meets the convergent validity requirements.

Discriminant Validity. In discriminant validity, values are used to cross-load factors that are useful for knowing whether a construct has sufficient discriminating ability, provided that the loading value in the intended construct is greater than the other values and the standard value for each construct is greater than 0.7. can be seen in Table 4 below:

Table 4. Value Outer Loading

	Facilities	Satisfaction	Quality	Environment	Tariff
Facilities1	0.871				
Facilities10	0.790				
Facilities2	0.825				
Facilities13	0.787				
Facilities14	0.848				
Facilities15	0.753				
Facilities12	0.707				
Facilities5	0.749				
Facilities6	0.875				
Facilities8	0.838				
Facilities9	0.807				
Satisfaction1		0.748			
Satisfaction10		0.778			
Satisfaction11		0.827			
Satisfaction12		0.879			
Satisfaction13		0.813			
Satisfaction14		0.808			
Satisfaction15		0.780			
Satisfaction2		0.813			
Satisfaction3		0.799			
Satisfaction4		0.782			
Satisfaction5		0.758			
Satisfaction6		0.786			
Satisfaction7		0.827			
Satisfaction8		0.786			
Satisfaction9		0.788			

	Facilities	Satisfaction	Quality	Environment	Tariff
Quality1			0.877		
Quality10			0.883		
Quality12			0.889		
Quality13			0.831		
Quality14			0.731		
Quality2			0.875		
Quality4			0.819		
Quality5			0.806		
Quality6			0.909		
Quality7			0.725		
Quality9			0.727		
Environment1				0.841	
Environment10				0.806	
Environment11				0.843	
Environment12				0.862	
Environment15				0.867	
Environment2				0.893	
Environment3				0.892	
Environment5				0.868	
Environment6				0.752	
Environment9				0.764	
Tariff10					0.894
Tariff11					0.861
Tariff12					0.854
Tariff13					0.841
Tariff14					0.858
Tariff15					0.806
Tariff2					0.804
Tariff3					0.800
Tariff4					0.827
Tariff5					0.847
Tariff6					0.754
Tariff7					0.805
Tariff8					0.868
Tariff9					0.875

Source Data processed with SmartPLS 4 (2025)

In the table shown, all items have a standard construct value of more than 0.7, and the value of loading in all intended constructs is greater than in other values. So shows that manifest variables are all valid and can explain their latent variables, and they already meet the discriminant validity requirements, and also the values cross-loading exceed the value of 0.7, so there is no need to retest it (Jogiyanto, 2009).

Reliability Test. There is composite reliability and Cronbach's alpha on reliability tests. The reliability value of indicators in a variable is tested by composite reliability and Cronbach's alpha. If the value composite reliability and Cronbach's alpha are > 0.7, then a variable can be said to fulfill composite reliability and Cronbach's alpha. Value can be seen composite reliability of each of the variables in Table 5 below.

Table 5. Value Composite Reliability

Variable	Value Composite Reliability
(X1) Environment	0.898
(X2) Rates	0.970
(X3) Facilities	0.945
(Z) Quality of Service	0.927
(Y) Resident Satisfaction	0.963

Source Data processed with SmartPLS 4 (2025)

The value composite reliability shown in the table above has met the requirements of more than 0.7. Reliability testing is also seen from the value of Cronbach's alpha, which is presented in Table 6 below.

Table 6. Value Cronbach's Alpha

Variable	Value Composite Reliability
(X1) Environment	0.839
(X2) Rates	0.967
(X3) Facilities	0.934
(Z) Quality of Service	0.863
(Y) Resident Satisfaction	0.959

Source Data processed with SmartPLS 4 (2025)

Value Cronbach's Alpha, the table above shows values above 0.7, which proves that the measurements in this research are reliable.

Evaluation Of Structural Model (Inner Model). To see the direct and indirect influence between variables, structural model tests or evaluations are carried out inner model. Start by looking at the value R-square, then model fit, path coefficient, and then specific indirect effects.

R-square value. Value R Square or Determinant Coefficient (magnitude of influence) and Q2 Predictive Relevance or how good the observation values are can be seen in Table 7below:

Table 7. R-Squares

	R Square	R Square Adjusted
Service Quality (Z)	0.821	0.814
Satisfaction Resident (Y)	0.764	0.754

Source Data processed with SmartPLS 4 (2025)

The table above obtained the results of the Influence coefficient that the R Square variable for Flat Environment, Tariffs, Facilities and Service Quality on the Satisfaction of Flat Residents is 0.821, meaning that the amount of influence of Flat Environment, Tariffs, Facilities and Service Quality on the Satisfaction of Flat Residents Employees is 82.1 % and the remaining 17.9 % is influenced or explained by other factors or variables that were not studied in the research model. Then the Flat Environment, Tariffs and Facilities for the Quality of Service provided by BP Batam is 0.764, meaning that the amount of influence of the Flat Environment, Tariffs and Facilities on the Quality of Service provided by BP Batam is 76.4 % and the remaining 23.6 % is influenced or explained by other factors or variables that are not studied in this research model.

T-Statistics (Bootstrapping). Carrying out the bootstrapping method on SmartPLS 4 can be continued if the previous data meet the measurement requirements. The bootstrapping method is a new sampling procedure by repeating N new samples from n-sized original data, where it is carried out for a new sample to take sampling points from the original data one by one times by taking (Efron & Tibshirani, 1994), for results from t-statistics (bootstrapping) can be seen in Table 8 below.

Table 8. T-Statistics (Bootstrapping)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
X1 -> Y	0.083	0.069	0.086	0.961	0.337
X2-> Y	0.455	0.157	0.104	3,501	0.028
X3)-> Y	0.378	0.388	0.081	4,684	0.000
X1 -> Z	0.011	0.033	0.110	0.103	0.918
X2 -> Z	0.489	0.481	0.120	4,067	0.000
X3 -> Z	0.212	0.203	0.103	2,068	0.039
Z -> Y	0.443	0.447	0.085	5,243	0.000
X1 -> Z -> Y	0.094	0.089	0.047	1,988	0.047
X2 -> Z-> Y	0.005	0.019	0.051	0.098	0.922
X3 -> Z -> Y	0.217	0.211	0.055	3,953	0.000

Source Data processed with SmartPLS 4 (2025)

CONCLUSION

Based on data analysis, the results of the hypothesis test were as follows:

1. The environment has a direct positive and insignificant influence on the satisfaction of the flat residents.
2. Tariffs have a direct positive and significant influence on the Satisfaction of Flat Residents.
3. Facilities have a positive and significant effect on the satisfaction of Flat Dwellers.
4. The environment has a positive and insignificant effect on the quality of service received by flat residents.
5. Tariffs have a positive and significant effect on the quality of service received by flat residents.
6. Facilities have a positive and significant effect on the quality of service received by flat residents.
7. The environment has a positive and significant influence on the satisfaction of flat residents through service quality.
8. Tariffs have a positive and significant influence on the Satisfaction of Flat Residents through Service Quality.
9. Facilities have a positive and significant influence on the Satisfaction of Flat Residents through Service Quality.
10. Service Quality has a significant positive influence on the Satisfaction of Flat Residents..

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