ANALYZING CUSTOMER SATISFACTION OF WASTE BANK IN MANADO

ANALISIS KEPUASAN PELANGGAN DI BANK SAMPAH MANADO

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Abstract: One of the problems faced by urban managers throughout Indonesia especially in Manado city is waste management. Data from the Manado City Environment Agency even records that the volume of waste in Manado city has reached 828,812 cubic meters, or has continued to increase significantly since 2012. The waste bank is a campaign for handling waste by buying back waste in terms of deposit Factors that are considered important and that have not provided satisfaction must be improved and factors that are considered important and that have provided satisfactory services must be maintained. The performance and services of the waste bank to customers need to be assessed through customer satisfaction. This study aims to find out whether Responsiveness, Availability, Hospitality, Atmosphere simultaneously and partially affect Customer Satisfaction. This research uses a Quantitative method with Multiple Linear Regression. The Population in this research refers to waste Bank Customer in Manado and the number of samples is 70 respondents. The result showed that every variable simultaneously and partially does not affect customer satisfaction. The researcher suggests waste banks have to pay attention to customer satisfaction with improving Responsiveness, Availability, Hospitality, Atmosphere.

Keyword: *service quality, responsiveness, availability, hospitality, atmosphere, customer satisfaction*

Abstrak: *Salah satu masalah yang dihadapi oleh manajer perkotaan di seluruh Indonesia terutama di kota Manado adalah pengelolaan limbah. Data dari Badan Lingkungan Hidup Kota Manado bahkan mencatat bahwa volume sampah di kota Manado telah mencapai 828.812 meter kubik, atau terus meningkat secara signifikan sejak 2012. Bank sampah adalah kampanye untuk menangani limbah dengan membeli kembali limbah dalam bentuk simpanan. yang dianggap penting dan yang tidak memberikan kepuasan harus ditingkatkan dan faktor-faktor yang dianggap penting dan yang telah menyediakan layanan yang memuaskan harus dipertahankan. Kinerja dan layanan bank sampah kepada pelanggan perlu dinilai untuk kepuasan pelanggan. Penelitian ini bertujuan untuk mengetahui apakah Daya Tanggap, Ketersediaan, Keramahtamahan, Suasana secara simultan dan sebagian mempengaruhi Kepuasan Pelanggan. Penelitian ini menggunakan metode Kuantitatif dengan Regresi Linier Berganda. Populasi dalam penelitian ini mengacu pada Nasabah Bank limbah di Manado dan jumlah sampel adalah 70 responden. Hasil penelitian menunjukkan bahwa setiap variabel secara simultan dan parsial tidak mempengaruhi kepuasan pelanggan. Peneliti menyarankan bank sampah untuk memperhatikan kepuasan pelanggan dengan meningkatkan menanggapi, ketersediaan, keramahan, suasana.*

Kata kunci: *kualitas jasa, dayatanggap, ketersediaan, keramtamahaan, suasana, kepuasanpelanggan*

INTRODUCTION

Research Background

One of the problems faced by urban managers throughout Indonesia especially in Manado city is waste management. Along with increasing economic growth, the standard of living of the population has also increased. Waste management that is not managed properly can cause environmental pollution and disrupt aesthetics. Accumulation of rubbish or littering into open areas will result in soil pollution which also impacts groundwater channels. Data from the Manado City Environment Agency even records that the volume of waste in Manado city has reached 828,812 cubic meters, or has continued to increase significantly since 2012. Head of the Department of Waste and B3 Waste in the Manado City Environment Agency, the behavior of people who do not want to reduce plastic waste such as straws, mineral bottles, and minimarket shopping bags is a factor in the increasing volume of waste in Manado City each year. Many people who do not care about throwing all the trash in its place and bringing it to the Final Disposal Site (TPA) are also a trigger for it difficult to overcome waste.

The waste bank management model is not only helping to clean the environment but also has an economic benefit. The waste bank management model is also associated with the local community to take on and manage their waste to reduce waste and also received economic benefits. to determine certain waste management, customer satisfaction plays an important role. Without customer satisfaction, the waste bank management model could not be carried out well. The satisfaction of customers is needed in achieving and supporting Manado's waste management.

Research Objective

The purpose of this research is:
1. To find out whether responsiveness significantly affect customer satisfaction
2. To find out whether availability significantly affect customer satisfaction
3. To find out whether hospitality significantly affect customer satisfaction
4. To find out whether the atmosphere significantly affect customer satisfaction

THEORETICAL REVIEW

Consumer Behavior

Consumer behavior defines consumer behavior as the totality of consumer's decisions concerning the acquisition, consumption, and disposition of goods, services, activities, experiences, people, and ideas by decision-making over time (Hoyer and Macinnis, 2010).

Customer Satisfaction

Customer satisfaction has been one of the top tools for a successful business. Customer satisfaction is defined as an overall evaluation based on the total purchase and consumption experience with good or service over time (Fornell, et al., 1996).

Waste Bank

The term waste bank consists of two words. The bank is an intermediary institution that has a function as a place to save and lend money and also financial transactions. Waste is defined as all unwanted or unusable material, which is usually discarded by its owner (Pinheiro, 2015). The waste bank is a concept of community empowerment in fact because the management of waste is the need of every household and in the process, the waste bank is always a tempting thing and can attract community participation. Many types and varieties of waste banks, all of which cannot be leveled or categorized uniformly as a social entrepreneur. Some of them don't even take advantage or are then categorized as a social institution (Ross, 2015).

Services Quality

The definition of service quality can be interpreted as an effort to meet the needs and desires of consumers, as well as accuracy in balancing consumer expectations (Tjiptono, 2007).

Previous Research

There is an investigation analysis of quality, customer satisfaction, and business performance in the food industry. The main objective of the research is to determine the influence of quality on customer satisfaction and business performance and competitiveness. The result shows a correlation between the main factors, although

partial results were due to more factors mostly statistically insignificant (Suchánek, et al., 2015).A study conducted to know the complex interrelationship between service quality, customer satisfaction, and customer loyalty. This study confirms the link between excellent business processes that result in high service quality in the banking sector with customer satisfaction and customer loyalty (Minh and Huu, 2016). Another study conducted to analyze the quality of service to customer satisfaction and its impact on customer loyalty in the Borobudur Hotel in Jakarta. The study shows that the variables of facilities, service quality, and customer satisfaction significantly affect customer loyalty variables simultaneously or partially. Also, facilities and quality of service variables have a significant effect on customer satisfaction variables (Rianto and Fitriyani, 2017).
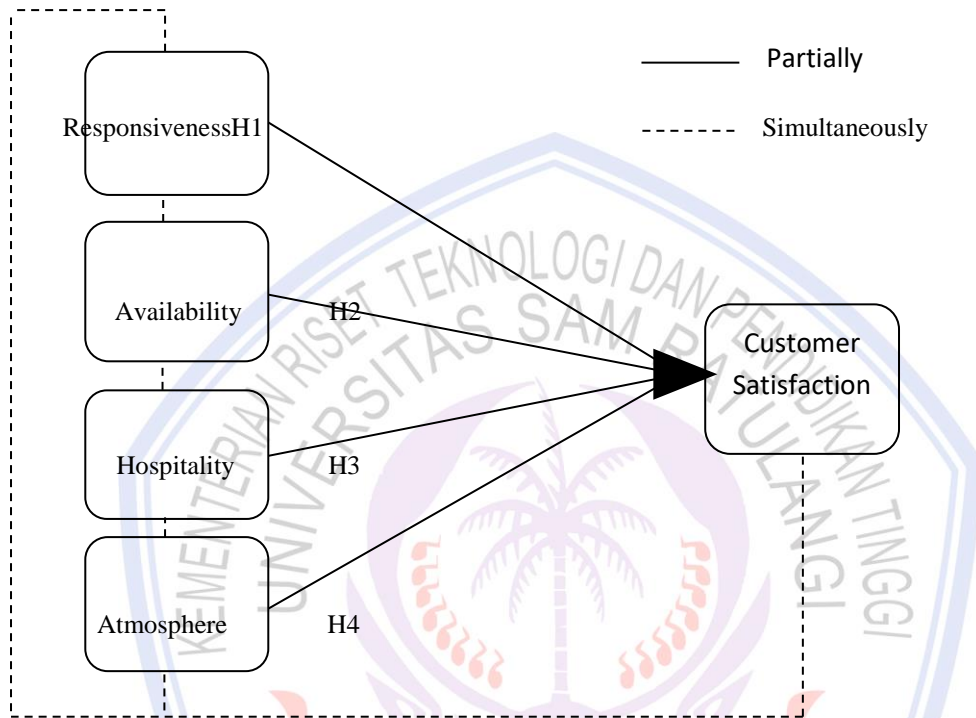
Conceptual Framework

Figure 1. Conceptual Framework
Source: Data Processed, 2020

Research Hypothesis
H1: Responsiveness significantly affect customer satisfaction
H2: Availability significantly affect customer satisfaction
H3: Hospitality significantly affect customer satisfaction
H4: Atmosphere significantly affect customer satisfaction

RESEARCH METHOD

Research Approach
This research uses a quantitative approach. The quantitative approach emphasizes objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Causal analysis research conducted to establish a cause-and-effect relationship among variables. This is undertaken to find out the effect of Responsiveness (X1), Availability (X2), Hospitality (X3), and Atmosphere (4) toward Customer Satisfaction (Y) in waste bank Manado.

Population, Sample, and Sampling Technique
The population in this research is the customer of the waste bank in Manado. The sampling method that can be used for this research is the purposive sampling method with the sample size of the research will be 700 respondents.

Data Collection Method
Operational Definition of Research Variables
Table 1. Variable Definition

No	Variable	Operational Definition	Indicators
1.	Responsiveness (X_1)	The willingness to help customers and provide prompt services.	1. Fast and efficient service 2. Employees are willing to help customers 3. Waste bank employees can provide services on time. Othman, Owen (2001)
2.	Availability (X_2)	The quality or state of being empty, available, or ready to be used, occupied or taken.	4. Waste bank employees can handle customer complaints 5. Waste picker service available 6. Trash bank employees always provide the latest information. Othman, Owen (2001)
3.	Hospitality (X_3)	The provision of carrying, easy access. Good/communication customer understanding and individualized attention is given to customers.	7. Trash bank employees are friendly in providing services 8. Communicating effective information to customers 9. Trash bank employees are not discriminatory in providing services. Othman, Owen (2001)
4.	Atmosphere (X5)	The effort to design buying environments to produce specific emotional effects in the buyer that enhance purchase probability.	10. Clean Trash bank service waiting room 11. The waiting room for a comfortable Trash bank service 12. Trash bank employees have a neat appearance. (Garvin, 1987)
5.	Customer Satisfaction (Y)	The result of an evaluation process that contrasts pre-purchase expectations with the perception of performance during and after the consumption experience.	13. Customer relationship 14. Service improvement 15. Service of quality. (Garvin, 1987)

Source: Data Processed, 2020

This research analyzes the primary data to gather information. The primary data of this study were taken from the questionnaires. The questionnaires were distributed to respondents so they can respond directly to the questionnaires.

Validity and Reliability

Validity test is to see the validity of the questions, the researcher use Validity test. It is used to see whether the questions within the questionnaire are valid and in-line with the research. Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests. The reliability test is established by testing for both consistency and stability of the answer question.

Multiple Linear Regression

Multiple regression analysis is a technique to observed value more than one X to estimate or predict corresponding Y value (Cooper and Schindler, 2001).

The equation model of multiple linear regression analysis used in this research can formulate as shown below:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Description:
Y = Customer Satisfaction
X1 = Responsiveness
X2 = Availability
X3 = Hospitality
X4 = Atmosphere
a = Constant
B1 = Regression Coefficient X1
B2 = Regression Coefficient X2
B3 = Regression Coefficient X3
B4 = Regression Coefficient X4
e = Error

RESULT AND DISCUSSION

Result

Validity and Reliability

Responsiveness (X1), Availability (X2), Hospitality (X3), and Atmosphere (X4) have a higher value than the r-table value that is 0.2. The significant level of each indicator of variables is below than the significant level of 5% or 0.05. It means that every indicator in the questionnaire in this research is valid and can be used for further analysis. The variable is reliable because the value of Cronbach's Alpha is 0,971 bigger than 0.7.

Result of Multiple Linear Regression Analysis
Multiple Linear Regression Result
Table 2. Result of Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	0.938	0.341	
	Responsiveness	0.102	0.129	0.334
	Availability	0.044	0.123	0.146
	Hospitality	0.071	0.109	0.243
	Atmosphere	0.152	0.111	0.506

Dependent Variable: Customer Satisfaction
Source: Data Processed 2020

Based on the multiple linear regression equation above, it can be interpreted as follows:
1. The constant value in this equation is 0.938, it means if Responsiveness (X1), Availability (X2), Hospitality (X3), Atmosphere (X4) has 0 value, then the value of Organizational Performance is 0.938.
2. Coefficient variable regression of Responsiveness (X1) is 0.102, it means if the value of independent variable except for Responsiveness not change and the value of Responsiveness increase, then the value of Customer Satisfaction will increase as much 0.102, it means Responsiveness does not influence Customer Satisfaction

3. The coefficient variable regression of Availability (X2) is 0.044, it means if the value of the independent variable except for Availability not change and the value of Availability increases, then the value of Customer Satisfaction will increase as much 0.044, it means Availability does not influence Customer Satisfaction.

4. The coefficient variable regression of Hospitality (X3) is 0.071, it means if the value of the independent variable except for Hospitality not change and the value of Hospitality increases, then the value of Customer Satisfaction will increase as much 0.071, it means Hospitality does not influence Customer Satisfaction.

5. The coefficient variable regression of Atmosphere (X4) is 0.152, it means if the value of the independent variable except Atmosphere not change and the value of Atmosphere increases, then the value of Customer Satisfaction will increase as much 0.152, it means Atmosphere does not influence Customer Satisfaction.

Normality Test
Table 3.One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		70
Normal Parameters	Mean	.0000000
	Std. Deviation	2.09461002
Most Extreme Differences	Absolute	.074
	Positive	.062
	Negative	-.074
Kolmogorov-Smirnov Z		.616
Asymp. Sig. (2-tailed)		.843

Test distribution is Normal. b. Calculated from data
Source: Data Processed 2019

Based on the results, the significance value is 0.843. Because the significance value is more than 5% (0.05), it can be concluded that the residue is normally distributed.

Multicollinearity Test
Table 4.Multicollinearity Result

Variable	Collinearity Test			
	Tolerance		VIP	
	RESULT	VALUE	RESULT	VALUE
Responsiveness	0.66	> 0.1	15.217	< 10
Availability	0.71	> 0.1	14.081	< 10
Hospitality	0.83	> 0.1	11.929	< 10
Atmosphere	0.85	> 0.1	11.730	< 10

Source: Data Processed 2020

The data below shows that all the tolerance values of the independent variables > 0.1 and the VIF value of the independent variables are < 10, which means that there is no multicollinearity.

Heteroscedasticity Test
Table 5.Heteroscedasticity

Variable	Sig
Responsiveness	0,431
Availability	0,721
Hospitality	0,517
Atmosphere	0,176

Source: Data Processed 2020

Based on the data above, the significant total is > 50% (0.05) it means there is no heteroscedasticity in the regression model.

Correlation Coefficient and Coefficient Determination Test
Table 6.Result of Correlation Coefficient and Coefficient Determination test
Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.162[a]	.026	-.033	2.111
a. Predictors: (Constant), Responsiveness, Availability, Hospitality, Atmosphere				

Source: Data Processed 2020

The value of R Square is 0.026 or 2.6%, that means it means Responsiveness (X1), Availability (X2), Hospitality (X3) Atmosphere (X4) simultaneously insignificant to Customer Satisfaction (Y) with a total value of 2.6%, while the remaining 97.4% is explained by other factors not included in this study.

Hypothesis Test
Table 7.F-Test

Result of F-test
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 **Regression**	7.870	4	1.967	.442	.778[a]
Residual	289.573	65	4.455		
Total	297.443	69			
a. Dependent Variable: Customer Satisfaction					
b. Predictors: (Constant), Responsiveness, Availability, Hospitality, Atmosphere					

Source: Data Processed 2020

Based on the results of data processing contained in table 4.13, research with 70 total data and a 5% significance level in table f is 2.36. Thus it can be said that the value of F count = 0.442> F table = 2.36. This means that the independent variables consisting of Responsiveness, Availability, Hospitality, and Atmosphere do not influence Customer Satisfaction in Manado Trash Bank.

T-Test
Table 8. T-Test Result

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 **(Constant)**	9.142	2.078		4.399	.000
Responsiveness	-.066	.223	-.059	-.295	.769
Availability	.233	.223	.187	1.046	.300
Hospitality	.019	.195	.017	.099	.921
Atmosphere	.009	.207	.007	.046	.964
a. Dependent Variable: Customer Satisfaction					

Source: Data Processed 2020

Based on table 4.14 that the research variable with the amount of data as much as 70 and a significance level of 5%, the t table value is 1.99714

1. Partially Responsiveness has no significant influence on Customer Satisfaction at waste Bank Manado. count (0.295) <ttable (1.99714) and the significance value is 0.769>0.05.

2. Partially Availability has no significant influence on Customer Satisfaction at waste Bank in Manado. count (1.046) <ttable (1.99714) and the significance value is 0.300>0.05.

3. Partially Hospitality has no significant influence on Customer Satisfaction at waste Bank in Manado count (.009) <ttable (1.99714) and the significance value is 0.011>0.05.

4. Partially Atmosphere has no significant influence on Customer Satisfaction at waste Bank in Manado count (0.046) <ttable (1.99714) and the significance value is 0.946 >0.05.

Discussion

The independent variables are responsiveness, availability, hospitality, and atmosphere that affect the dependent variable which is customer satisfaction. The result of the regression shows that all of the variables do not significantly affect customer satisfaction. Previous research done by Yoga (2012) shows that the data collected that was done by some tests and results show that the dimension of service quality Availability does not affect customer satisfaction at Serela Hotel Bandung, where the sig value obtained is 0.273 which is more basic compared to 0.05.5. The dimension of service quality Responsiveness has no effect on customer satisfaction at Serela Hotel Bandung, where the sig value obtained is 0.280 which is more basic than 0.05.

CONCLUSION AND RECOMMENDATION

Conclusion

After examining the findings and discussing the result, the conclusions based on this research can be formulated as follows:
1. Responsiveness does not significantly affect customer satisfaction.
2. Availability significantly affects customer satisfaction.
3. Hospitality does not significantly affect customer satisfaction.
4. The atmosphere does not significantly affect customer satisfaction.

Recommendation

Service quality is an important role in achieving customer satisfaction. Responsiveness still needs to look at and be improved, for that reason, researchers suggest that every single employee at Manado waste Bank should improve their services into fast and efficient service. The waste banks also need to provide services on time, so that all customers of waste banks will be more comfortable to do a transaction at the waste Bank. Waste Banks in Manado should pay more attention to services in the form of being able to accompany customer complaints, available waste pickup systems, and also able to provide the latest information. The availability is still needed to pay attention because if there is no service available at the moment, especially at the tome where you are going to use the waste banks, you can not use the service. Othman and Owen (2011), included Hospitality in Servqual which means, hospitality plays an important role in service quality. This variable still needs to pay more attention. Waste Bank pays more attention to hospitality in providing services and communicating information effectively to customers. Same as the atmosphere, it would be more comfortable to customers if the waiting room is clean rather than the room is dirty and smell.

REFERENCES

Cooper and Schindler. 2001. *Business Research Methods*.2nd edition. P,271. USA: McGraw Hill.https://books.google.co.id/books/about/Business_research_methods.html?id=RVZaAAAAYAAJ&redir_esc=y.Accessed on February 8th, 2020.

Fornell, C., Mitha, S., Morgeson, F.V. III.and Krishnan, M.S. 2006. Customer Satisfaction and Stock Prices: High Returns, Low Risk. *Journal of Marketing*, Vol. 70, pp. 3-14.http://terpconnect.umd.edu/~smithas/papers/mithascsstkprice2006.pdf. Accessed on February 8th, 2020.

Garvin.1987.*ManagingQuality: Manajemen Alutu Terpadu Total Quality Management.* Edisi 2001. Ghalia Indonesia, Jakarta https://www.scirp.org/(S(czeh2tfqyw2orz553k1w0r45))/reference/ReferencesPapers.aspx?ReferenceID=1 917060.Accessed on 9th February, 2020.

Hoyer and Macinnis. 2010. *Consumer Behavior*.5th edition. USA, South Western.https://books.google.co.id/books/about/Consumer_Behavior.html?id=IJVgPgAACAAJ&redir_es c=y. Accessed on February 18th, 2020.

Minh and Huu. 2016.The Relationship between Service Quality, Customer Satisfaction, and Customer Loyalty: An Investigation in the Vietnamese Retail Banking Sector. *Journal of Competitiveness*.https://www.researchgate.net/publication/305310481_The_Relationship_between_Servic eQuality_Customer_Satisfaction_and_Customer_Loyalty_An_Investigation_in_Vietnamese_Retail_Bank ing_Sector. Accessed on February 20th, 2020.

Othman and Owen. 2001.The Multi Dimensionality of CARTER Model to Measure Customer Service Quality (SQ) in the Islamic Banking Industry (AS study in Kuwait Finance House).*International Journal of Islamic FinancialService.*.https://pdfs.semanticscholar.org/15fc/adfff972d487c2dd1dfe853bc0e99608532e.pdf. Accessed on February 10th, 2020.

Pinheiro, T. 2015. Waste Banks and Trading Platforms Make Waste a Valuable Resource. *International Journal of Energy Economics and Policy*. https://www.researchgate.net/publication/318860377_Waste_Bank_Waste_Management_Model_in_Impr oving_Local_Economy. Accessed on February 5th, 2020.

Rianto and Fitriyani. 2017.The Influence of Facility and Service Quality towards Customer Satisfaction and Its Impact on Customer Loyalty in Borobudur Hotel in Jakarta. *Bonus Business Review*. .https://www.neliti.com/id/publications/167995/the-influence-of-facility-and-service-quality-towards-customer-satisfaction-and.Accessed on February 18th, 2020.

Ross. 2015.*PengantarKuangan Perusahaan*. 2nd edition.SalembaEmpat, Jakarta. https://www.researchgate.net/publication/330661591. Accessed on February 15th, 2020.

Suchanek, Richter, and Králová,2013.*Customer Satisfaction, Product Quality, and Performance of Companies.Review Of Economic Perspectives.* https://is.muni.cz/do/econ/soubory/aktivity/obzor/6182612/52576851/2014_4_02_SuchanekRichterKralo va.pdf. Accessed on February 2nd, 2020.

Tjiptono.2007.*StrategiPemasaran*.2nd edition. Andi, Yogyakarta. https://www.researchgate.net/publication/316829743_Strategi_Pemasaran. Accessed on February 20th 2020.

Yoga Pramanda.2012. *Pengaruh Kualitas jasa terhadap kepuasan pelanggan pada hotel Grand Serela Bandung.* https://repository.widyatama.ac.id/xmlui/handle/123456789/3296. Accessed on May 17th 2020.