Analysis of Clean Water Service Performance on Customer Satisfaction of Ampana City Regional Drinking Water Companiest

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Abstract:- The drinking water supply system in Ampana City, because there are several problems that arise in the process of providing clean water, including the level of water flow has not met customer expectations, namely the lack of water flow with stable pressure for 24 hours continuously, especially during the busy hours. the top of the water flows with very little pressure. This is because the water pressure condition does not meet the minimum permitted water pressure requirements which is caused by several factors. The aim of this research is to analyze the clean water service performance of the Regional Drinking Water Company in Ampana City simultaneously or partially on customer satisfaction of the Regional Drinking Water Company in Ampana City, and to analyze strategies for improving the service performance of the Regional Drinking Water Company in Ampana City. This type of research is explanatory research, the research sample uses Proportional Random Sampling, namely filling out a questionnaire by customersWater Treatment Plants and Storage TanksAmpana Citywith a total of 99 people. Data analysis uses multiple linear regression methods. The research conclusion shows that both simultaneously and partially, the performance of PDAM clean water services in Ampana City has a significant effect on customer satisfaction with a relationship of Y= 2.624 + 0.129X1 + 0.129X2 + 0.176X3 + 0.146X4. The strategy to improve clean water provider services at the Ue Tanah Regional Drinking Water Company in Ampana City is to increase the quality and quantity of clean water services, commitment to customer satisfaction, handling customer complaints, and improving company performance.

Keywords:- *Service Performance, Clean Water, Customer Satisfaction.*

I. INTRODUCTION

In urban areas, the need for clean water forms its own pattern which is greatly influenced by population growth and the characteristics of the existing community, regarding the economic level, topography and social habits of the community in particular. Managed clean water supply systemLocal water companyObtaining clean water will result in different quality and quantity of services from one city/district to another.

Management of clean water services for the needs of the people of Ampana City, especially Ampana City District with 2,932 SR (House Connection) services and Ratolindo District with 3,694 SR services implemented byLocal water companyTojo Una-Una is a company owned by the government of Tojo Una-Una Regency with a raw water source of Saluaba intake/capture of 50 liters/second and Kajuwou intake of 20 liters/second, so the total service capacity reaches 70 liters/second. But the same asLocal water companyin other cities in Indonesia,Local water companyAmpana City also has the same problem, namely a low level of service (coverage level), which affects the level of satisfaction of the company's clean water customers.

One of the problems that has and will arise in the management of clean water resources is capacityLocal water companyAs a provider of clean water, in general it is still limited, both in terms of reach and quality of service, while with the enactment of Law Number 8 of 1999 concerning Consumer Protection, the demands of the public as consumers regarding quality and serviceLocal water companyis increasing, especially regarding the performance of the water networkLocal water companyto be distributed to the community as customers or consumers of the company.

This also happens in the area of Ampana City, Tojo Una-Una Regency, most of the Ampana City area is in the lowlands surrounded by mountains. The urban elevation of Ampana is 1 masl to around 90 masl. Hydrological conditions in this region consist of underground water, surface water and rivers where the condition of each water source is very dependent on the intensity of rainfall and the level of forest destruction.

From the results of the preliminary survey, the drinking water supply system in Ampana City still needs to be improved. There are several problems that have arisen in the water supply process so far, including the level of water flow that has not met customer expectations, namely that water flow has not been fulfilled at a stable pressure for 24 hours continuously, especially at peak hours, water flows at very high pressure. small. This is because the water pressure

condition does not meet the minimum permitted water pressure requirements.

Sometimes customers complain about water distribution which is sometimes not smooth. This can be seen from several complaints about customer connections, pipe damage, poor water distribution, leaking pipes and valves and installation damage.

Consumer satisfaction is one thing that has an important role in business. Consumer satisfaction is the main milestone in the success of a company. Therefore, in an effort to fulfill consumer satisfaction, companies must be observant in knowing the shifting needs and desires of consumers which change over time. If producers can produce products and services according to what consumers want and need, consumers will feel satisfied. Every consumer has a different level of satisfaction. According to Philip Kotler (Sunyoto, 2013), consumers can experience one of three general levels of satisfaction, namely if the performance is below expectations, the customer will feel disappointed, but if the performance meets expectations, the consumer will feel satisfied and if the performance exceeds expectations, the consumer will feel very satisfied. happy or excited.

According to Tjiptono (2014), satisfaction comes from the Latin words "satis" which means good enough or adequate and "facio" means to do or make. According to Park in Irawan (2021), expressing customer satisfaction is a customer's feeling as a response to the product or service that has been consumed. Performance is a general term used for some or all of the actions or activities of an organization in a period with reference to a number of standards such as past or projected costs, on the basis of efficiency, management accountability and the like (Kirom, 2015). Meanwhile, according to Prawirosentono (2011) performance is the result of work that can be achieved by a person or group of people in an organization, in accordance with their respective authority and responsibilities in order to achieve the goals of the organization in question legally, without violating the law and in accordance with morals or ethics. .. Meanwhile, according to Mangkunegara (2009) performance (work achievement) is the result of work in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him.

Company performance is the ability of a company to manage existing resources so that it can provide value to the company. By knowing the company's performance, we can measure the level of efficiency and productivity of the company. Apart from that, company performance assessments are also useful for knowing the extent of a company's development. The definition of performance is the work results that can be achieved by a person or group of people in a company in accordance with their respective authority and responsibilities in an effort to achieve company goals legally, without breaking the law and not conflicting with morals and ethics (Riva'i and Basri, 2004). According to Minister of Home Affairs Decree Number 47 of 1999, performance is the level of management successLocal water companyin a particular financial year. Performance AssessmentLocal water companyincludes operational aspects, financial aspects and administrative aspects carried out by the Supervisory Body at the end of each financial year. Results of assessment of performance achievementsLocal water companyThis is used as the basis for determining the classification of success levelsLocal water company.

II. RESEACRH METHODS

A. Location and Time of Research

This research was conducted in Ampana City or precisely intwo sub-districts, namely Ampana City District and Ratolindo District, Tojo Una-Una Regency. The research locations can be seen in Figure 1.

Fig. 1: Map of research locations
Ampana City District and Ratolindo District

B. Types of Research

This type of research is explanatory or explanatory research. Determining the type of explanatory research is in accordance with the understanding explained by Sugiyono (2015) that explanatory research is intended to explain the position of the variables being studied and the relationship between one variable and another. Explanatory research, apart from being research that highlights the relationship between research variables, also tests hypotheses that have been previously formulated, so that this type of research can be called hypothesis testing research or testing research by Singarimbun and Effendi in Sugiyono (2015).

C. Data Source

The data sources collected in this research are divided into two, namely:

➢ *Primary Data Source*

Primary data is research data obtained from sources directly without going through intermediary media. In this research, primary data is data that comes directly from respondents, where the data is data from filling out questionnaires that researchers have distributed to respondents. Apart from that, primary data can also come from direct observations or observations in the field.

➢ *Secondary Data Sources*

Secondary data is also needed regarding the disclosure of the phenomena in this research. This secondary data includes literature (Library Research), supporting documents related to the object under study, documents that are relevant to this research.

D. Population and Sample

➢ *Population*

In a study, the selected population has a close relationship with the problem being studied. Population is an area consisting of objects or subjects that have certain characteristics and qualities determined by researchers to be studied and then conclusions will be drawn from the results (Sugiyono, 2015). In this research, the population is the population of service usersLocal water companywhich are in three sub-districts in Ampana City, namely Ampana Kota District with a population of 2,932 House Connections, and Ratolindo District with a population of 3,694 House Connections. So, if totaled, the population in this study reached 6,626 Home Connections.

➢ *Research Sample*

The sample is part of the characteristics and number of the population (Sugiyono, 2015). Based on Slovin's calculations, the total sample in this study was 98.51 people or rounded up to 99 respondents. The sampling technique used in this research is Proportional Random Sampling. Proportional sampling was carried out by taking subjects from each stratum or each region determined to be balanced by the number of subjects in each stratum or region (Arikunto, 2014).

E. Data Collection Technique

In data collection techniques, the author uses several methods, including:

➢ *Observation*

This is a data collection technique by observing objects that have been researched directly, regularly and systematically, these observations include both research and post-research.

➢ *Literature Study (Library Research)*

Literature study is used to collect secondary data from companies, theoretical basis and information related to this research by means of documentation. The study was carried out, among other things, by collecting data sourced from literature, lecture materials, and other research results that are related to the research object. This is done to gain additional knowledge about the problem being discussed.

➢ *Field Study (Field Research)*

In this research, the author collected the necessary data by conducting a questionnaire as a technique for collecting data from respondents. A questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to answer (Sugiyono, 2015). Respondents are then asked to fill in statements on a verbal ordinal scale in a certain number of categories. The data that has been collected from the independent and dependent variable questionnaires will then be measured using data measurements with calculated weights of up to 5, with categories:

- Strongly disagree with point 1.
- Disagree with point 2.
- Simply agree with point 3
- Agree with point 4
- Totally agree with point 5

F. Research Instrument

The variables and indicators used in this research are as follows.

Table 1: Research Variables and Indicators

Variable	Indicator	Source
Physical Evidence (X1)	The water pressure that comes out of the customer's water taps	Tjiptono (2014)
	The availability of clean water meets customer needs every day.	
	Water flows smoothly from the Regional Drinking Water Company's taps to customers within 24 hours.	
	The quality of clean water is seen from taste, color and smell	
	There is a complaint service provided by the Regional Drinking Water Company.	
	The existence of service supporting facilities v (such as clean rooms and availability of parking spaces).	
Trustworthy (X2)	Continuity of the smooth flow of Regional Drinking Water Company water distributed to customers.	Son (2011)
	Suitability of water tariff prices and other service costs	
	The level of accuracy of calculations for water usage payments made by officers.	
Responsive (X3)	Local water companyResponsive in meeting customer needs.	Kotler in Purwani and Wahdiniwaty (2017)
	Speed in taking action from the Regional Drinking Water Company regarding complaints submitted by customers.	
	The attitudes and responses of Regional Drinking Water Company officers to customers who convey suggestions regarding improving service.	
	The ability of Regional Drinking Water Company officers to complete work in accordance with customer complaints.	
Guarantee (X4)	Local water companycan guarantee the safety and hygiene of clean water treatment installation facilities that will be distributed to customers.	Kotler in Purwani and Wahdiniwaty (2017)
	Local water companycan guarantee timeliness in providing services.	
	Local water companycan guarantee that there are no errors in providing services that cause customer losses.	
	Politeness of Regional Drinking Water Company officers.	
Customer Satisfaction (Y)	Fulfillment of customer expectations.	Indrasari (2019)
	Persist in using the service.	
	Recommend to others.	

G. Data Analysis

In connection with the problems previously stated, an analysis will be carried out based on data obtained using the following analytical equipment:

➢ *Validity test*

The validity test is to determine the level of validity of the instrument (questionnaire) used in data collection. This validity test is carried out to find out whether the items presented in the questionnaire are truly able to reveal with certainty what will be studied. This validity test is obtained by correlating each indicator score with the total variable indicator score, then the correlation results are compared with the critical value at a significance level of 0.05. An instrument is said to be valid if it is able to measure what is desired and the level of validity of the instrument shows the extent to which the data collected does not deviate from the description of the variable in question.

➢ *Reliability Test*

The reliability test is intended to determine the consistency of the measuring instrument in its use, or in other words the measuring instrument has consistent results when used many times at different times. According to Riduwan (2019). For the reliability test, the Cronbach Alpha Technique is used, where an instrument can be said to be reliable if it has a reliability coefficient or alpha of 0.60 or more. In this research, reliability calculations use the alpha formula proposed by Riduwan (2019). In this research,

validity and reliability tests were carried out using the SPSS data processing program.

➢ *Normality test*

The data normality test is a data distribution test that will analyze whether the distribution is normal or not, so it is used in parametric analysis. However, there is another solution if the data is not normally distributed, just increase the number of samples. The use of the Kolmogorof Smirnof test or also commonly called the KS test is included in the non-parametric group because researchers do not know whether the data used is parametric data or vice versa. In the KS test, data is said to be normal if the sig value is > 0.05.

➢ *Multicollinearity Test*

This test is used to determine whether there is a significant influence or correlation between the independent variables. There is also a fairly high or significant influence, meaning that there are the same aspects measured in the independent variable. This kind of thing is not suitable to be used to jointly determine the contribution of the independent variable to the dependent variable. According to Anwar (2009), detection of multicollinearity can be done by looking at the VIF value from the results of linear regression analysis. If the VIF value is > 10, then there are symptoms of high multicollinearity.

➢ *Multiple Linear Regression*

Multiple linear regression analysis is a linear relationship between two or more independent variables (X1, X2,….Xn) and the dependent variable (Y). This analysis is to determine the direction of the relationship between the independent variable and the dependent variable, whether each independent variable is positively or negatively related and to predict the value of the dependent variable if the value of the independent variable increases or decreases. The data used is usually on an interval or ratio scale.

➢ *Hypothesis testing*

• *F Test (Simultaneous Test)*

Sugiyono (2015) states that the F test is a statistical test tool simultaneously to determine the effect of the independent variable on the dependent variable. Together, a comparison is made between F sig and F table ($\propto$ = 0.05) at the 95% confidence level. The statistical hypothesis is as follows:

• The initial hypothesis stated that if the value of F sig $<\propto=$ 0.05 at the 95% confidence level, then the independent variable has a significant effect on the dependent variable.
• The alternative hypothesis states that if the F value is sig $>\propto=$ 0.05 at the 95% confidence level, then the independent variable has no significant effect on the dependent variable.

• *T test (partial)*

According to Ghozali (2018), the t statistical test basically shows how much influence an explanatory or independent variable individually has in explaining variations in the dependent variable. One way to carry out a t test is to compare the t statistical value with the critical value according to the table. The t test is an individual statistical test tool to determine the effect of each independent variable on the dependent variable. The method is to compare t sig

and$\propto=$ 0.05. At the 95% confidence level. The statistical hypothesis is as follows:

• If t sig $<\propto=$ 0.05 at the 95% confidence level, then Ho is rejected and Ha is accepted, it is proven that the observed independent variable has a significant effect on the dependent variable.
• If t sig $>\propto=$ 0.05 at the 95% confidence level, then Ho is accepted and Ha is rejected. It is proven that the observed independent variable has no significant effect on the dependent variable.

III. RESULTS AND DISCUSSION

A. Test Research Instruments

Validity Test is used to measure whether a questionnaire is valid or not, in other words, this test is carried out to test the validity of each statement item in measuring the variable. Validity testing in this research was carried out by correlating the score of each item statement addressed to the respondent with the total score for all items.

The correlation technique used to test the validity of statement items in this research is Pearson Correlation.If the calculated r is greater than the r table then the instrument is said to be valid, and if the calculated r has a value smaller than the r table then the instrument is declared invalid. In this study, researchers tested the results of the answers of the 99 respondents involved, with a confidence interval of 95% or level of significance (α) = 0.05. This means that if the significance value obtained from this validity test is below 0.05, then the proposed instrument or statement is declared valid. To find out the results of the validity test for each statement in this research questionnaire, you can see the following table 2:

Table 2: Validity Test Results

Symbol	Sig. (2-tailed)	Sig. required	Information
X1.1	0,000	<0.05	Valid
X1.2	0,000	<0.05	Valid
X1.3	0,000	<0.05	Valid
X1.4	0,000	<0.05	Valid
X1.5	0,000	<0.05	Valid
X1.6	0,000	<0.05	Valid
X2.1	0,000	<0.05	Valid
X2.2	0,000	<0.05	Valid
X2.3	0,000	<0.05	Valid
X3.1	0,000	<0.05	Valid
X3.2	0,000	<0.05	Valid
X3.3	0,000	<0.05	Valid
X3.4	0.001	<0.05	Valid
X4.1	0,000	<0.05	Valid
X4.2	0,000	<0.05	Valid
X4.3	0,000	<0.05	Valid
X4.4	0,000	<0.05	Valid
Y1	0,000	<0.05	Valid
Y2	0,000	<0.05	Valid
Y3	0,000	<0.05	Valid

Based on the results of the validity test on the statement items in each of the variables above, it is known that all statements are declared valid because they have a significance value below or smaller than 0.05, each statement item in these variables will still be used in further research.

Reliability testing of all items/statements used in this research will use the Cronbach's alpha formula (Cronbach's alpha coefficient), where in general it is considered reliable if the Cronbach's alpha value is > 0.60. Complete results of the reliability test in this research can be seen in the following table 3:

Table 3: Realibity Test Results

No	Variable	Cronbach Alpha (a)	Required Cronbach's Alpha	Note.
1	Physical evidence (X1)	0.674	>0.60	Reliable
2	Trustworthy (X2)	0.856	>0.60	Reliable
3	Responsive (X3)	0.718	>0.60	Reliable
4	Guarantee (X4)	0.757	>0.60	Reliable
5	Customer satisfaction (Y)	0.733	>0.60	Reliable

Based on the summary of reliability test results as summarized in the table above, it can be seen that the Cronbach Alpha value for each variable is greater than 0.60. These results can be concluded that all research instruments can be declared reliable/reliable and can be used for further analysis

B. Classisc Assumption Test Results

➢ Multicollinearity Test

To detect multicollinearity, this can be done by looking for the size of the Variance Inflation Factor (VIF) and the tolerance value. If the VIF is less than 10 and the tolerance value is more than 0.10 then the regression is free from multicollinearity. The results of the multicollinearity test using SPSS software are as follows:

Table 4: Multicollinearity Test Results

Variable	Collinearity Statistics		Information
	Tolerance	VIF	
Physical Evidence	0.421	2,376	There is no correlation between independent variables
Can be trusted	0.542	1,844	
Responsive	0.530	1,886	
Guarantee	0.554	1,804	

Based on Table 4, it can be seen that the Variance Inflation Factor (VIF) value is below 10 and the tolerance value is above 0.10. So there is no multicollinearity between the independent variables.

➢ Normality Test

The Kolmogorov Smirnov test is a normality test that is widely used, especially after the existence of many statistical programs in circulation. The basic concept of the Kolmogorov Smirnov normality test is to compare the distribution of the data (which will be tested for normality) with the standard normal distribution. The standard normal distribution is data that has been transformed into Z-Score form and is assumed to be normal. So actually the Kolmogorov Smirnov test is a test of the difference between data tested for normality and standard normal data. As with the ordinary difference test, the application of the Kolmogorov Smirnov test is that if the significance is below 0.05, it means that the data to be tested has a significant difference from standard normal data, meaning the data is not normal. On the other hand, if the significance is above 0.05, it means that there is no significant difference between the data to be tested and standard normal data. The results of the normality test of this research data are as follows:

Table 5: Normality Test Results Using SPSS (Kolmogorov-Smirnov)

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		99
Normal Parameters, b	Mean	0.0000000
	Std. Deviation	0.72907916
Most Extreme Differences	Absolute	0.046
	Positive	0.036
	Negative	-0.046
Statistical Tests		0.046
Asymp. Sig. (2-tailed)		,200c,d

The results of the Kolmogrov-Smirnov test show the number 0.200, which means that the significance value is above 0.05, so it can be concluded that the variables are normally distributed.

C. Data Analysis Results

➤ *Multiple Linier Regression Results*

Multiple linear regression analysis is used to analyze the influence of each Independent variable (X) on the Dependent variable (Y) as the dependent variable. The regression results from the processed primary data can be seen in the following table:

Table 5: Multiple Regression Test Results

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,624	0.926		2,834	0.006
	Physical evidence (X1)	0.129	0.061	0.199	2,131	0.036
	Trustworthy (X2)	0.192	0.052	0.305	3,713	0,000
	Responsive (X3)	0.176	0.063	0.232	2,787	0.006
	Guarantee (X4)	0.146	0.049	0.240	2,945	0.004

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_3 X_3 + \varepsilon$$
$$Y = 2.624 + 0.129X_1 + 0.192X_2 + 0.176X_3 + 0.146X_4$$

From the description above, it shows that the independent variable analyzed, namely clean water service performance, which consists of several variables such as physical evidence (X1), trustworthiness (X2), responsiveness (X3), and guarantee (X4) gives a positive relationship to the satisfaction variable. customer (Y)Regional Drinking Water Company in Ampana City, Tojo Una-Una Regency. For a more detailed explanation of the form of this equation, see the following:

- The constant is 2,624, meaning that if the performance of clean water services consisting of physical evidence (X1), reliability (X2), responsiveness (X3), and guarantee (X4) does not exist or the value is 0, then customer satisfaction has a value of 2,624.
- The physical evidence variable (X1) is 0.129, meaning that the physical evidence variable is in clean water services by partiesLocal water companycan be increased, assuming the other variables remain constant, there will be an increase in satisfaction of 0.129.
- The reliable variable (X2) is 0.192, meaning that the variable can be trusted in clean water services by partiesLocal water companycan be increased, assuming the

other variables remain constant, there will be an increase in satisfaction of 0.192.
- The responsive variable (X3) is 0.176, meaning that the variable is responsive in clean water services by partiesLocal water companycan be increased, assuming the other variables remain constant, there will be an increase in satisfaction of 0.176.
- The guarantee variable (X4) is 0.146, meaning that the guarantee variable is in clean water services by the partyLocal water companycan be increased, assuming the other variables remain constant, there will be an increase in satisfaction of 0.146.

➤ *Hypothesis Test*

- *Simultaneous Test Results (F Test)*

To test the extent to which clean water service performance which consists of variables in the form of physical evidence (X1), reliability (X2), responsiveness (X3) and guarantee (X4) has an influence on the customer satisfaction variable (Y)PDAM in Ampana City, Tojo Una-Una Regencysimultaneously tested using the F test or simultaneous test, by means of F sig with F table (∝ = 0.05) at the 95% confidence level. If the F sig value is smaller than∝= 0.05 at the 95% confidence level, then simultaneously all independent variables (X) have a significant effect on the

dependent variable (Y). Conversely, if the F value is sig. greater than $\propto$= 0.05 at the 95% confidence level, then simultaneously the dimensions of the independent variable (X) have no significant effect on the dependent variable (Y). Regarding the results of simultaneous regression testing, the following are obtained:

Table 7: Simultaneous Effect Test (F Test)

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	98,817	4	24,704	44,578	,000b
	Residual	52,093	94	0.554		
	Total	150,909	98			

a.Dependent Variable: Y
b. Predictors: (Constant), X4, X2, X3, X1

Testing the influence of the independent variables together on the dependent variable using the F test. The results of statistical calculations show the F value sig = 0.000 which means it is smaller than $\propto$= 0.05 at the 95% confidence level, then Ho is rejected and Ha is accepted, and thus it is proven that the clean water service performance variables are in the form of physical evidence (X1), trustworthy (X2), responsive (X3), and guarantee (X4) which is observed simultaneously has a significant effect on the dependent variable, in this case the customer satisfaction variable (Y)Regional Drinking Water Company in Ampana City, Tojo Una-Una Regency. Apart from that, to get an idea of the magnitude of the percentage influence of all the independent variables on the dependent variable, it is necessary to analyze the coefficient of determination (R^2).To calculate the magnitude of the influence between variable

Table 8: Determinant Coefficient (R Square)

Model Summary b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.809a	0.655	0.640	0.744

a.Predictors: (Constant), X4, X2, X3, X1
b. Dependent Variable: Y
Source: Results of Questionnaire Data Processing via SPSS.

The determinant coefficient (R2) measures how far the model's ability to explain the dependent variable. The SPSS output results in the table above show that R square is 0.655 or equal to 65.50%. This shows that the influence of clean water service performance byLocal water companyin Ampana City, Tojo Una-Una Regency, it has an influence with a value of 65.50%, while the remaining 34.50% is influenced by other factors.

- *Partial Influence Test Results (t Test)*

Testing by comparing the significance values of t and$\propto$= 0.05, at the 95% confidence level. If the significance value of t resulting from the calculation is below or smaller than$\propto$= 0.05 at the 95% confidence level, then partially the physical evidence (X1), trustworthy (X2), responsive (X3), and guarantee (X4) variables have an influence on the dependent variable, in this case repurchase interest, the results can be seen in the following table:

Table 9: Partial Influence Test (t Test)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,624	0.926		2,834	0.006
	Physical evidence (X1)	0.129	0.061	0.199	2,131	0.036
	Trustworthy (X2)	0.192	0.052	0.305	3,713	0,000
	Responsive (X3)	0.176	0.063	0.232	2,787	0.006
	Guarantee (X4)	0.146	0.049	0.240	2,945	0.004

The results of the partial test of the results of this research show that:
- For the physical evidence variable (X1), the results of data analysis obtained a significance value of 0.036 so the value

is smaller than the value$\propto$= 0.05 at the 95% confidence level. On this basis, it is stated that the observed physical evidence variable (X1) partially influences the dependent variable, which in this case is customer satisfaction

(Y).Regional Drinking Water Company in Ampana City, Tojo Una-Una Regency.

- On variablescan be trusted(X2), from the results of data analysis, a significance value of 0.000 was obtained so the value is smaller than the value∝= 0.05 at the 95% confidence level. On this basis it is stated that the variablecan be trusted(X2) which is observed partially influences the dependent variable which in this case is customer satisfaction (Y)Regional Drinking Water Company in Ampana City, Tojo Una-Una Regency.

- For the responsive variable (X3), the results of data analysis obtained a significance value of 0.006 so the value is smaller than the value∝= 0.05 at the 95% confidence level. On this basis it is stated that the variableresponsive(X3) which is partially observed has an effect on the dependent variable which in this case is customer satisfaction (Y)Regional Drinking Water Company in Ampana City, Tojo Una-Una Regency.

- In the guarantee variable (X4), from the results of data analysis, a significance value of 0.004 was obtained so the value is smaller than the value∝= 0.05 at the 95% confidence level. On this basis, it is stated that the guarantee variable (X4) which is partially observed has an effect on the dependent variable, which in this case is customer satisfaction (Y).Regional Drinking Water Company in Ampana City, Tojo Una-Una Regency.

D.Discussion

➤ *Clean Water Service Performance Local Water Company Simultaneously has a Significant Influence on Customer Satisfactionlocal Water Companyin Ampana City*

The research results show that the value of F sig = 0.000 is smaller than∝= 0.05 at the 95% confidence level, it is thus concluded that simultaneously the performance of clean water services carried out byLocal water company, through physical evidence variables, trustworthiness, responsiveness, and guarantees have a significant effect on customer satisfactionLocal water companyin Ampana City. Of course, this indicates that the simultaneous existence of these four variables in clean water service performance can have a significant influence on customer satisfactionLocal water companyin Ampana City, and these results show that the percentage influence of these four variables is 65.50%, while the remaining 34.50% is influenced by other factors that are not included in the variables studied, such as accountability for service performance, implementation of supervisory functions in the implementation of service activities, and etc. The results of this research show that the performance of clean water services carried out byLocal water companythrough the variables of physical evidence, trustworthiness, responsiveness, and assurance together can triggeremergencecustomer satisfaction with clean water services provided byLocal water companyin Ampana City. The better and more adequate each service provided can affect customer satisfaction, likewise if the service provided is inadequate then the customer will feel dissatisfied. The results of this research are in line with the results of research conducted by Affandi et al (2017) which suggests that service

quality factors simultaneously all have an influence on customer satisfaction.Local water companyTirta Mon Pase.

➤ *Influence of Clean Water Service Performance Local water company Partially on Customer Satisfaction Local water company in Ampana City.*

- *The Effect of Physical Evidence on Customer Satisfaction Local water companyin Ampana City*

The results of research carried out through partial tests show that the physical evidence variable produces a significance value of 0.036, which is a value smaller than 0.05. So it is stated that the physical evidence variable partially influences customer satisfactionLocal water companyin Ampana City. . According to Zeithaml et al (2009) "physical evidence is something that can determine consumers using the service". Physical evidence is a real thing that influences consumer satisfaction in purchasing and using the products or services offered (Kotler and Keller, 2012). Apart from this theory, the results of this research are also supported by the results of research conducted by Liensky and Hetharie (2022) who found that physical evidence has a positive and significant influence on customer satisfaction.Local water companyDobo city.

Physical evidence is a variable that influences whether satisfaction increases or decreases. Therefore, physical evidence such as water pressure coming out of customers' water taps needs to be considered, because if we refer to Minister of Public Works Regulation No. 18/PRT/M/2007, good water pressure, minimum 0.5 – 1.00 kgf/cm2. Based on the water pressure that reaches customers, the results of water pressure checks in several distribution area zones show that the amount of water pressure tends to be uneven, at peak times, namely between 06.00 to 10.00, the water pressure sometimes does not meet the minimum permitted water pressure requirements. , namely an average of 0.40 – 0.60 kgf/cm2, while the maximum water pressure is from 19.00 to 19.00. 05.00 the average reaches 1.40 – 1.80 kgf/cm2. This data shows that at certain hours the level of water flow has not met customer expectations, namely that water flow has not been fulfilled with good pressure for 24 hours continuously, especially at peak hours, water flows with low pressure.

The availability of clean water meets customer needs every day, because raw water sources/springs are used in clean water servicesLocal water companyin Ampana City are the IPA and the Saluba Tank with a capacity of 50 ltr/sec and the Kajowou Tank with a capacity of 20 ltr/sec, so that the total raw water capacity to serve clean water needs in Ampana City reaches 70 ltr/sec.

Fig. 2: Water Treatment Plant and Saluba Storage Tank

Fig. 3: Kajowou Water Treatment Plant and Storage Tank

Of course, this large raw water source capacity can meet the clean water needs of customers of the Water Treatment Plant and Storage Tanks in Ampana City. Apart from that, with this large raw water capacity, water flows smoothly from the water treatment plant taps and storage tanks in customer homes within 24 hours if there are no piping problems.

Then other physical evidence is that the quality of the clean water that is distributed has no taste, color and no smell, this is because the raw water source used is pure water that comes from springs and rivers in the mountainous areas around the area, apart from that It is also supported by raw water processing facilities in the form of an intake building facility which functions as a place where water originating from the source is first stored. This building is equipped with a screen bar which has the function of filtering foreign objects in the water. After going through the intake building, the water will then flow into a large tank before being pumped to the water treatment plant or abbreviated to WTP which is the main clean water processing installation, where there are several parts in the processing at the WTP that make the water suitable for use, such as (Ananta, 2022):

- *Coagulation*

    In this tub the water will be destabilized from colloidal/dirt particles. The destabilization process can be carried out chemically by adding alum (aluminum sulfate) or by physical means, namely by rapid mixing, hydraulically (hydraulic jump) and mechanically (stirring rod) so that the alum mixes evenly with the water.

- *Flocculation*

    In the process, the water will be stirred slowly so that the alum mixed in the water can bind dirt particles and form larger flocs so they settle more easily.

- *Sedimentation*

    After floc is formed (usually in the form of mud), the water will enter the sedimentation tank where the heavier floc density will automatically settle to the bottom of the tank and clean water can be separated from the mud.

- *Filtration*

After the water is separated from the mud, the water will be filtered again to make it really clean by being put into a filtration tank. Filtration tanks can use membrane technology, but can also be substituted with other media such as sand and silica gravel. This process is carried out with the help of gravity.

- *Disinfection*

After the processing process is complete, additional processes (disinfection) are usually carried out in the form of adding chlorine, ozonation, UV, heating, etc. to avoid the potential for germs and bacteria contained in the water.

Then, not only that, other physical evidence in the performance of clean water services by Water Treatment Installations and Land Storage Tanks is providing a complaint service whose function is to provide convenience to customers who wish to submit complaints, input regarding services, etc., so that the Installation Water Processing and Storage Tanks are always alert to various possibilities that occur regarding the services experienced by their customers.

Fig. 4: Condition of the service room for the Water Treatment Plant and Soil Water Storage Tank

Fig. 5: Condition of the outside of the Water Treatment Plant Service Office and Soil Water Storage Tank

The availability of supporting facilities for Water Treatment Plant and Storage Tank services (such as clean rooms and the availability of parking) provided by the Water Treatment Installation and Land Storage Tank is one of the important elements in determining customer satisfaction for Water Treatment Installations and Storage Tanks in Ampana City, because The support of adequate service facilities will certainly provide comfort to the company's customers who want to visit the Water Treatment Plant and Storage Tank offices.

Of course, by improving the physical evidence provided by the Water Treatment Plant and Land Ue Storage Tank, customer satisfaction will automatically increase because customers feel satisfied and happy with the physical evidence that supports the service performance of the Water Treatment Plant and Land Ue Storage Tank to customers in Ampana City.

➢ *The Influence of Trustworthiness on Customer Satisfaction at Water Treatment Plantsand storage tank in Ampana City*

The results of research carried out through partial tests show that the variable can be trusted to produce a significance value of 0.000, which is a value smaller than 0.05. So it is stated that this variable partially influences customer satisfaction at the Water Treatment Plant and Storage Tank in Ampana City. Building Trust is very important because trust is the key to brand survival in the long term. According to Asakdiyah (2010) trust is a key variable in developing a long-lasting desire to continue maintaining long-term relationships. Trust will build consumer perceptions, whether the brand has integrity, competence and benevolence and

other things that will influence their attitudes and behavior. In their research, Affandi et al (2017) found that the variable reliability partially had a significant effect on customer satisfaction at the Tirta Mon Pase Water Treatment Plant and Storage Tank.

A trustworthy variable is a variable whose service implementation is carried out by providing a guarantee to customers that the water service is provided by themThe Water Treatment Plant and Storage Tank is carried out by realizing the continuity of the smooth flow of water from the Water Treatment Plant and Storage Tank which is distributed to customers, where the Water Treatment Plant and Storage Tank continuously continues to distribute clean water to the homes of the residents of Ampana City who are customers of this company, because basically what customers want is the provision of clean water services throughout the day, where the water must continue to flow for 24 hours, especially during peak water hours, it is hoped that the water coming from the Water Treatment Plant and Storage Tank will continue to flow to the homes of the company's customers.

PartyWater Treatment Plants and Storage Tanks provide prices for water tariffs and other service costs at appropriate prices, in this case the Water Treatment Plants and Land Storage Tanks always refer to the level of use of water services by customers in determining the fees that must be paid by customers in utilizing them. clean water services from this company, from a survey conducted by researchers it is known that the average price of water per m3 borne by customers is Rp. 1,638,-. Meanwhile, there is no charge for other services such as complaints, information, etc.

Apart from that, officersWater Treatment Plants and Storage Tanks have the ability to calculate payments for water usage accurately, where officers carefully calculate the level of service usage so that errors rarely occur regarding the accuracy of clean water service usage data by customers of the Water Treatment Plants and Storage Tanks.

So, if this variable is good, it will really support customer satisfaction with the performance of clean water services carried out by the company.

➤ *Strategy for Improving Service Performance water Treatment Plants and Stroge Tanks Ampana City*

To overcome various problems in serving the clean water needs of its customers,Water Treatment Plants and Storage TanksUe Tanah has made several efforts as a strategy to improve service performanceWater Treatment Plants and Storage TanksLand in Ampana City, including:

➤ *Improving The Quality of Clean Water Services*

From observations, improving quality is one strategyWater Treatment Plants and Storage TanksUe Ampana City Land in improving the quality of clean water supply services for the community in Ampana City. This is an improvement in services aimed at consistency in maintaining the availability of clean water that meets health standards and

is suitable for consumption. Raw water sources used to serve clean water needs for customersWater Treatment Plants and Storage TanksAmpana City Land is surface/river water, the quality of the water treatment system needs to be improved to make it more hygienic for consumption in accordance with applicable drinking water regulations/standards, and raw water originating from springs, which can be distributed directly to customers without through the processing process first, only disinfectant (chlorine) is applied.

In its implementation, there are still several shortcomings felt by customers, namely that the water pressure decreases at certain hours. For this reason, efforts are needed to minimize complaints among customers. To meet water needs at peak service hours in 2024, it is hoped thatWater Treatment Plants and Storage TanksUE Land and related agencies are looking for additional potential alternative sources, optimizing the installed production capacity which has not been utilized due to the decrease in source water discharge by maintaining environmental sustainability, reforesting areas around water sources and implementing water loss prevention programs. Inventory and replace pipes that have exceeded their technical life.

➤ *Commitment Strategy In Providing Customer Statisfication*

Based on the results of field observations, the author found that the strategy focuses on commitment in providing satisfaction to customers, in answering the success of this strategy in terms of the extent of satisfaction felt by customers with the performance produced by the company. where is the strategy carried out by the companyWater Treatment Plants and Storage TanksUe Tanah by ensuring water channels continue to flow 24 hours every day. Provide information during repairs so that people are always ready to collect water so that there is no water shortage.

In this strategy the partiesWater Treatment Plants and Storage Tanksalso making efforts to reduce the level of water loss by involving various parties and making efforts to provide large costs so that the level of water loss can be minimized, such as replacing pipes with better quality, by reducing NRW. NRW is the difference between the volume of water produced and the volume of water accounted for. This difference can result in physical or non-physical leaks, because high Non Revenue Water (NRW) figures can reflect high water loss. Apart from that, there are also various efforts that can be taken, such as replacing damaged customer meters, monitoring pipe networks, controlling fraudulent customers. From the sideWater Treatment Plants and Storage TanksUe Tanah will continue to strive to reduce the level of water loss.

➤ *Complaint Handling Strategy*

Improving service with efficient complaint handling strategies can increase customer satisfaction and become loyal customers. The success of this strategy is influenced by 4 aspects, namely empathy towards customers, friendliness to customers, speed in handling, and ease of contacting the

company. Based on the results of observations, the author found that the overall complaint handling strategy for employeesWater Treatment Plants and Storage Tankshas been friendly and empathetic in providing its services, speed in handling complaints is in accordance with predetermined standards, handling complaints also depends on the number of complaints received, but now receiving complaints and correcting complaints is carried out 24 hours by the relevant officers. Incoming complaints are also very important forWater Treatment Plants and Storage Tanksbecause with that partyWater Treatment Plants and Storage Tanksalways strive to improve performance in providing services, because community satisfaction is a benchmark for performanceWater Treatment Plants and Storage it self.

> *Complaint Handling Strategy*

Based on the results of observations regarding monitoring and measuring customer satisfaction on an ongoing basis, it is a strategy to improve company performance, namely in various ways. For example, measuring every year the complaints received, what the level of resolution of customer complaints is, how quickly the resolution time is, and this measurement is an indicator of efforts to increase the acceleration of service in the future. Because reports/complaints from customers are a benchmark forWater Treatment Plants and Storage Tanksin improving better services. In implementing the programs and activities that have been carried out by PDAM Ue Tanah to increase the professionalism of Human Resources, there is training, guidance, and holding regular comparative study activities in order to broaden the employees' insight in managing the company

IV. CONCLUSION

Based on the research results described previously, the researchers drew the following conclusions:

- Simultaneously (simultaneously) the performance of clean water services in Water Treatment Plants and Storage Tanks (which consists of the variables physical evidence, reliability, responsiveness and guarantee) influences customer satisfaction of Water Treatment Plants and Storage Tanks in Ampana City.
- Partially, the performance of clean water services in Water Treatment Plants and Storage Tanks (which consists of the variables physical evidence, trustworthiness, responsiveness and guarantee) influences customer satisfaction of Water Treatment Plants and Storage Tanks in Ampana City.
- The strategy to improve clean water provider services at the Ue Tanah Regional Drinking Water Company in Ampana City is to improve the quality and quantity of clean water services, commitment to customer satisfaction, handling customer complaints, and improving company performance.

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