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EFFECT OF ELECTRICITY TARIFFS AND QUALITY OF SERVICE ON CUSTOMER SATISFACTION AND SALES OF ELECTRICAL ENERGY OF PT PLN (PERSERO) BOMBANA AREA

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ABSTRACT

This study aims to find out and analyze: (1) Whether electricity tariffs affect sales. (2) Does the quality of service affect sales. (3) Whether electricity tariffs affect customer satisfaction. (4) Does the quality of service affect customer satisfaction. (5) Does customer satisfaction affect the sale of electrical energy in PT PLN (Persero) Bombana District. The population in this study is the value of the company's performance every month PT. PLN (Persero) Bombana District throughout 2015-2019 (60 samples). This study uses alternative analysis techniques Partial Least Square (PLS) and this study will use Smart PLS software version 3.0 M3.

The results of this study show that: (1) Electric power tariffs have a positive and significant influence on the value of sales. (2) Quality of service has a positive and significant influence on the sale of electrical energy. (3) Electric power tariffs have a negative and significant influence on customer satisfaction. (4) The quality of service has a positive and significant influence on customer satisfaction. (5) Customer satisfaction has a positive and significant influence on the sales of electrical energy of PT PLN (Persero) Bombana District.

Keywords: Price, Quality, Satisfaction, Sales

Introduction

State Electricity Company or commonly called PT PLN (Persero) is a state-owned enterprise that is an extension of the government's hand to provide electrical services to all levels of society, be it for household, business, and industrial purposes. The main business of PT PLN (Persero) is divided into three core businesses, namely generation, transmission, and distribution. Distribution is the most frequently related part of the community because the distribution department is in charge of distributing electrical energy starting from the plant or substation to the customer.

One of the efforts of the management of PT PLN (Persero) to maintain the quality of its services and also to maintain the sustainability of the company has a benchmark of success that is used to assess whether the performance of all units in PT PLN (Persero) reaches the target or not. This benchmark of success is commonly called the *key performance indicator* (KPI).

In addition to the quality of service, several factors that can affect customer satisfaction according to Lupiyoadi (2006: 58) are product quality, emotion, and tariffs or prices. Research by Daryoso, et al, (2010), shows that the quality of service has a positive and significant effect on customer satisfaction. Harni et al (2013), concluded that the quality of service has a positive and significant effect on customer satisfaction. Quality of service has a close relationship with customer satisfaction because customers always expect to get maximum service from service providers/products so that what they receive is what they expect.

In the initial exploration at the research site, researchers can also draw the initial conclusion that the quality of service is an absolute must be given to PLN customers. Frequent disruptions in electricity distribution will greatly affect the satisfaction of the community as customers of PLN. PT PLN (Persero) rayon Bombana continues to improve the quality of its services, ranging from the addition of power capabilities, the addition of the power grid, the addition of interference protection, and *recovery time*.

At PT PLN (Persero) Rayon Bombana, there is still a difference *(gap)* regarding customer satisfaction between what customers expect and the reality of service performance provided by the company. Based on customer complaint data, it is known that customer complaints are as follows: complaints in the form of power outages, inconsistent electricity costs, electrical disturbances, and new electrical installations.

Literature Review

Marketing Concepts

According to William J. Stanton quoted by Swastha and Handoko, 2000, Marketing is an overall system of business activities aimed at planning, pricing, promoting, and distributing goods and services that can satisfy the needs of both existing buyers and potential buyers. According to Kotler, 2003, "The social and managerial process by which individuals and groups get their needs and desires by creating, offering, and exchanging products of value to each other".

Based on the above definition, it can be concluded that marketing has a broader meaning than sales, marketing includes the company's efforts that are characterized by identifying consumer needs that need to be satisfied, determining the price of the product accordingly, determining the way of promotion and sale of the product. So, marketing is also an interconnected activity as a system to generate profits.

Marketing Mix

According to Fandy, et al, 2006, the *Marketing Mix (Marketing Mix)* is a variable used by companies as a means to meet or serve the needs and desires of consumers. The variables contained in it are products, prices, distributions, and promotions. These four elements largely determine the direction of the company's marketing strategy. The strategy is a long-term plan that is used as a guideline for marketing personnel activities.

Price or Tariff

In economics, the price can be associated with the selling value or purchase value of a product or goods or services, and at the same time used as a variable that determines the comparison of similar products or goods. Throughout its history, the price has been a major factor influencing the choice of buyers. In the last decade, factors beyond price have become increasingly important. However, the price remains one of the most important elements in determining a company's sales volume, market share, and profits. Here are some understandings of the price according to marketing figures: According to Kotler and Armstrong (2008: 62), the definition of price in a narrow sense is "the amount charged for a product and service".

Price is the sum of all the value provided by a customer to benefit from owning or using a product or service. According to Gitosudarmo (2008: 228), the notion of price is the amount of money needed to get several goods and certain services or a combination of the two, while according to Lupiyoadi (2011: 61) pricing strategies are very significant in providing value to consumers and affecting the image of products, as well as the decision of consumers to buy.

Electricity Tariff on PLN

The term Basic Electricity Tariff can also be called Electric Power Tariff or Electricity Tariff. According to the Regulation of the Minister of Energy and Mineral Resources of the Republic of Indonesia, Number 30 of 2012 (PERMEN ESDM) Article 1 states that: "Electric Power Tariffs are electricity tariffs for consumers provided by the Company of PT PLN."

Electricity tariffs of PT PLN (Persero) refer to the 1945 Constitution article 33, electricity is a basic need that is needed by the community of course electricity tariffs must consider the condition of the people in Indonesia. Electricity tariffs at PT PLN (Persero) follow the basic electricity tariff (TDL) determined by the government, namely the Ministry of Energy and Mineral Resources with the approval of the DPR RI. So that the tariff on PT PLN (Persero) distinguishes tariffs into two types, namely subsidy and non-subsidized rates. The issue of electricity tariffs is regulated by the Minister of Energy and Mineral Resources Regulation No. 31 of 2014.

Quality of Service

Quality has a direct impact on the performance of both products and services. Therefore, quality is closely related to customer value and satisfaction. According to Kotler and Armstrong (2008: 272), the definition of product quality has two dimensions, namely level, and consistency. In developing a product, marketers must first choose a level of quality that will support the *positioning of the* product. In this study, product quality means the quality of performance or the ability of the product to carry out its functions. In addition to the level of quality, high quality can also mean a high level of consistency of quality. Product quality means the manufacturer ensures quality or is free from damage and is consistent in delivering targeted performance levels. All companies must certainly strive to achieve a high level of quality of certainty.

Customer Satisfaction

The concept of marketing teaches that the marketing activities of a company must formulate and compile a combination and wisdom of products, prices, promotions, and distribution as soon as possible so that the needs of consumers can be met, and satisfactory. Nowadays the attention to customer satisfaction and dissatisfaction is becoming greater. More and more people are paying more attention to this. The parties most directly related to customer satisfaction or dissatisfaction are marketers, consumers, consumers, consumers, and consumer behavior researchers. Every company must certainly establish an orientation on customer satisfaction as the main goal. The company will usually include its commitment to customer satisfaction in its mission statements, *advertisements, and public relations releases*. Many companies now believe that the main key to customer satisfaction is to provide value and satisfaction to customers through the delivery of quality products and services at competitive prices.

Sales

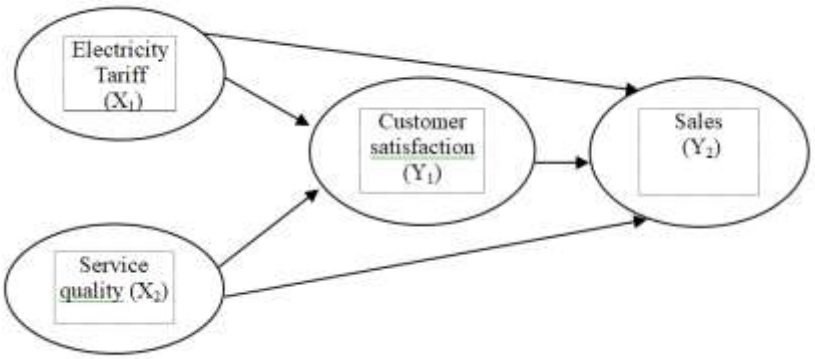
Sales is an integrated effort to develop strategic plans directed at the effort of gratifying the needs and desires of buyers, to get sales that generate profits (Marwan, 1991). Sales are the lifeblood of a company because from sales can be obtained profit and an effort to lure consumers who are trying to know their attractiveness so that they can know the results of the product. According to Winardi (1982), sales are a transfer of rights to transacted objects.

From this explanation in transferring or transferring goods or services, it is necessary for parties who work in the field of sales such as trade enforcement, agents, service representatives, and marketing representatives. Thus, it can be concluded that the definition of sales is the total amount imposed on customers for goods or services received, both on credit and in cash.

Conceptual Framework

Based on research conducted by Daryoso, et al (2010), the quality of service has a positive and significant effect on customer satisfaction. Based on research conducted by Iranita et al, 2011, concluded that product quality has a positive and significant effect on sales results. The quality of service and consumer satisfaction also has a positive and significant effect on sales results in the company. In addition, pricing has a positive and significant effect on the company's sales volume and customer satisfaction, based on the conclusions of research conducted by Dewi Karlina, 2010.

Figure 1. Conceptual Framework



Research Hypothesis

Based on the description above, the hypothesis in this study is as follows:

The hypothesis shows the relationship between the variables used in this study. In the next section, the relationship between the variables in this study will be explained.

1) Hypothesis 1: Electricity tariffs have a positive and significant effect on the sales of PLN Bombana Area.
2) Hypothesis 2: Service quality has a positive and significant effect on sales of PLN Bombana Area.
3) Hypothesis 3: Electricity tariffs have a negative and significant effect on customer satisfaction at PLN Bombana Area.
4) Hypothesis 4: Service quality has a positive and significant effect on customer satisfaction at PLN Bombana Area.
5) Hypothesis 5: Customer satisfaction has a positive and significant effect on the sales of PLN Bombana Area.

Research Methods

Research Objects and Approach

The object of this research is electricity tariffs and service quality on customer satisfaction and sales of electrical energy at PT. PLN (Persero) Rayon Bombana (Bombana Regency except Kabaena Island). This study uses a positivistic research approach, which is an approach in which everyone who conducts research tries to analyze facts and empirical data to identify factors that influence or cause something to happen.

Population

The population is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are determined to be studied and then drawn conclusions, according to Sugiyono (2010). The population in this study is the value of the company's performance every month PT. PLN (Persero) Rayon Bombana throughout 2015-2019 (60 samples).

Sample

The sampling technique used is purposive sampling. According to Sugiyono (2012), purposive sampling is a sampling technique with certain considerations. The data collected is data throughout 2015-2019, while the considerations used in this study are:

1) The occurrence of fluctuations in non-subsidized electricity rates (adjustments) from 2014 to 2017.
2) The data for each variable studied was recorded and validated since 2015

Data Types and Sources

In this study, the data was used in the form of secondary data. Secondary data is a source of research data obtained in a ready-made form in the form of publications. The data can come from internal or external to the organization and accessed via the internet, document searches, or information publication (Sekaran, 2011: 65). In this study, secondary data sources used are company documents in the form of performance reports and electricity tariffs from the Ministry of Energy and Mineral Resources owned by PT. PLN (Persero) Bombana area.

Data Analysis Technique

As explained in the previous section, this research uses an alternative analysis technique Partial Least Square (PLS) and this study will use the Smart PLS software version 3.0 M3. The following will explain the PLS analysis technique. Partial Least Square (PLS) is a factor of indeterminacy of a powerful analytical method because it does not assume that the data must be measured at a certain scale and can use a small sample size (Ghozali, 2008:18). Besides being able to be used as a confirmation of the theory, PLS can also be used to build relationships for which there is no theoretical basis or to test propositions (Ghozali, 2008: 18). PLS is believed to be very suitable for research with the purpose of prediction and theory development as well as research where the theoretical basis used is not too strong. Ghozali (2008:18-19) explains that the number of rough estimates of a small sample is:

1) Ten times the scale with the largest number of formative (causal) indicators (note the scale for constructs designed with reflexive indicators can be omitted), or
2) Ten times the largest number of structural paths are directed at certain constructs in the structural model.

Research Result

Evaluation of Measurement (Outer) Model

The measurement model for testing the validity and reliability, the coefficient of model determination, and the path coefficient for the equation model using SmartPLS can be seen in Figure 2 below:

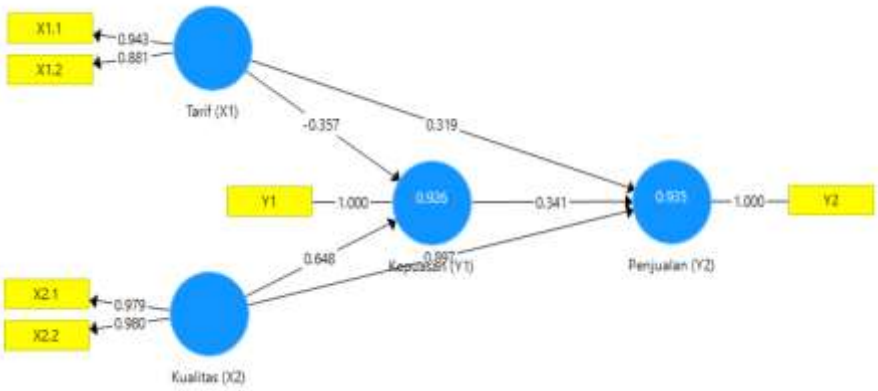


Figure 2. PLS Result Display Algorithm Effect of Electricity Tariff and Service Quality
Source: Data Processing with SmartPLS (2022)

Convergent Validity

Test results of convergent validity can be seen in the following table:

Table 1. AVE and Communality

Items	Variables	AVE	*Communality*
X1	Electricity Tariff	0,833	0,913
X2	Service quality	0,959	0,972
Y1	Customer satisfaction	1,000	1,000
Y2	Electric Energy Sales	1,000	1,000

Source: Data Processing with SmartPLS (2022)

The convergent validity of the measurement model using reflective indicators is assessed based on the loading factor of the indicators that measure the construct. In this study, there are 4 constructs with several indicators between 1 and 2 indicators. Based on the test results of the measurement model shown in Figure 2 and Table 1, it can be explained as follows:

1) The electricity tariff construct is measured using X1.1 and X.1.2, where all indicators have a loading factor above 0.7, AVE above 0.5, and communality above 0.5.
2) The construct of service quality is measured using X2.1 and X2.2, where all indicators have a loading factor above 0.7, AVE above 0.5, and communality above 0.5.
3) The construct of customer satisfaction is measured using Y1, where the indicator has a loading factor above 0.7, AVE above 0.5, and communality above 0.5.
4) The electrical energy sales construct is measured using Y2, where the indicator has a loading factor above 0.7, AVE above 0.5, and communality above 0.5.

Based on the results of the loading factor above, it can be concluded that the construct has good convergent validity.

Discriminant Validity

Discriminant validity testing is carried out to prove whether the indicator in a construct will have the largest loading factor in the construct it forms than the loading factor with other constructs. It can be seen cross loading in Table 2 below:

Table 2. Cross Loading Variable Electricity Tariff, Service Quality, Customer Satisfaction, and Electric Energy Sales

Indicator	Electricity Tariff	Service quality	Customer satisfaction	Electric Energy Sales
X1.1	0,943	0,872	0,893	0,794
X1.2	0,881	0,580	0,701	0,466
X2.1	0,729	0,979	0,904	0,939
X2.2	0,874	0,980	0,937	0,934
Y1	0,878	0,940	1,000	0,901
Y2	0,718	0,956	0,901	1,000

Source: Data Processing with SmartPLS (2022)

Based on Table 2 above, the cross-loading value also shows good discriminant validity because the correlation value of the indicator to the construct is higher than the correlation value of the indicator with other constructs. As an illustration, the loading factor of electricity tariffs, where the quality of service, customer satisfaction, and sales of electrical energy has a smaller value than the X1.1 and X1.2 indicators on the electricity tariff variable.

Composite Reliability and Cronbach's Alpha

In addition to constructing validity tests, construct reliability tests were also carried out as measured by composite reliability and Cronbach's alpha from the indicator block measuring constructs. The following are the results of testing composite reliability and Cronbach's alpha from Smart PLS:

Table 3. Composite Reliability and Cronbach's Alpha Test Results from Smart PLS

Variable	*Cronbach's Alpha*	*Composite Reliability*
Electricity Tariff	0,805	0,909
Service quality	0,958	0,979
Customer satisfaction	1,000	1,000
Electric Energy Sales	1,000	1,000

Source: Data Processing with SmartPLS (2022)

A construct is declared reliable if it has a composite reliability value above 0.70 and Cronbach's alpha above 0.60. From the SmartPLS output above, all constructs have a composite reliability value above 0.70 and Cronbach's alpha above 0.60. So, it can be concluded that the construct has good reliability.

Structural Model Testing (Inner Model)

The structural model in PLS is evaluated by using R^2 for the dependent variable and the path coefficient value for the independent variable which is then assessed for significance based on the t-statistic value of each path. The structural model of this research can be seen in the following figure:

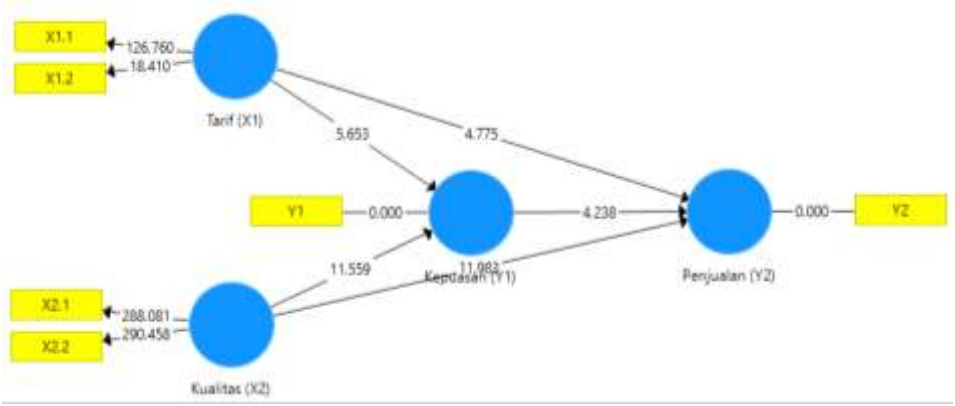


Figure 2. Structural Model Output Display

Source: Data Processing with SmartPLS (2022)

To assess the significance of the predictive model in structural model testing, it can be seen from the t-statistic value between the independent variables to the dependent variable in the path coefficient table in the SmartPLS output below:

Table 4. Path Coefficient (Mean, STDEV, and t-Value)

	Original Sample (O)	*Sample Mean* (M)	*Standard Deviation* (STDEV)	*t-Statistic* (|O/STDEV|)	*P-Value*
Electricity Tariff -> Electric Energy Sales	0,319	0,322	0,067	4,775	0,000
Service Quality-> Electrical Energy Sales	0,897	0,898	0,075	11,983	0,000
Electricity Tariff -> Customer Satisfaction	-0,357	-0,357	0,063	5,653	0,000
Service Quality-> Customer Satisfaction	0,648	0,647	0,056	11,559	0,000
Customer Satisfaction -> Electrical Energy Sales	0,341	0,343	0,080	4,238	0,000

Source: Data Processing with SmartPLS (2022)

Hypothesis Testing

Testing of Hypothesis 1

From Table 4 above, it can be seen that the original sample estimate value of electricity tariffs on electricity sales is 0.319 with a significant p-value of 0.000 which is smaller than 0.05 and is indicated by a t-statistic value of 4.775 which is greater than the t-table value of 1,990. The positive original sample estimate value indicates that electricity tariffs have a positive effect on sales of electrical energy. Based on the test results, it can be concluded that the first hypothesis is accepted. electricity tariffs have a positive and

significant effect on sales of electrical energy at PLN Bombana Area.

Testing of Hypothesis 2

From Table 4 above, it can be seen that the original sample estimate value of service quality on sales of electrical energy is 0.897 with a significant p-value of 0.000 which is smaller than 0.05 and is indicated by a t-statistic value of 11.983 which is greater than the t-table value of 1,990. The positive original sample estimate value indicates that service quality has a positive effect on sales of electrical energy. Based on the test results, it can be concluded that the second hypothesis is accepted. Service quality has a positive and significant effect on sales of electrical energy at PLN Bombana Area.

Testing of Hypothesis 3

From Table 5.6 above, it can be seen that the original sample estimate of electricity tariffs on customer satisfaction is -0.357 with a significant p-value of 0.000 which is smaller than 0.05 and is indicated by a t-statistic value of 5.653 which is greater than the t-table value of 1,990. The negative original sample estimate value indicates that the electricity tariff has a negative effect on customer satisfaction. Based on the test results, it can be concluded that the third hypothesis is accepted. Electricity tariffs hurts customer satisfaction at PLN Bombana Area.

Testing of Hypothesis 4

From Table 5.6 above, it can be seen that the original sample estimate value of service quality on customer satisfaction is 0.648 with a significant p-value of 0.000 which is smaller than 0.05 and is indicated by a t-statistic value of 11.559 which is greater than the t-table value of 1.990. The positive original sample estimate value indicates that service quality has a positive effect on customer satisfaction. Based on the test results, it can be concluded that the fourth hypothesis is accepted. Service quality has a positive and significant effect on customer satisfaction in PLN Bombana Area.

Testing of Hypothesis 5

From Table 5.6 above, it can be seen that the original sample estimate of customer satisfaction with electrical energy sales is 0.341 with a significant p-value of 0.000 which is smaller than 0.05 and is indicated by a t-statistic value of 4.238 which is greater than the t-table value of 1,990. The positive original sample estimate value indicates that customer satisfaction has a positive effect on sales of electrical energy. Based on the test results, it can be concluded that the fifth hypothesis is accepted. Customer satisfaction has a positive and significant effect on sales of electrical energy at PLN Bombana Area.

Discussion

The Effect of Electricity Tariffs on Sales of Electrical Energy at PLN Bombana Area

Electricity tariffs based on the results of this study have a positive and significant impact on sales of electrical energy. This is by the results of research from Karlina (2010) which states that price has a positive and significant effect on sales volume. This increase in electricity rates at PLN Bombana Area does not reduce customer electricity consumption, this can indicate that changes in electricity rates that occur are still accessible to the public. The increase in electricity rates does not make people reduce their electricity consumption, and vice versa when electricity rates decrease.

This can happen because the composition of the sales of PLN Bombana Area is mostly contributed by household customers whose daily lives depend on electricity. It can be different if the composition of industrial customers is the majority because the industry will be very affected if there is a change in electricity rates according to the capital owned. The factor of the absence of a commensurate competitor from PLN Bombana Area is certainly very decisive in influencing the purchase decision or use of electrical energy by customers. So, regardless of the price set by the government, people will still use PLN electricity without any other comparable options.

The Effect of Service Quality on Sales of Electrical Energy at PLN Bombana Area

Service quality has a positive and significant impact on sales of electrical energy. It can be concluded that if the quality of service increases, it will cause a significant increase in sales of electrical energy at PLN Bombana Area. The results of this study are supported by research conducted by Iranita (2011) which found that service quality has a positive and significant effect on sales. PLN sales will increase if the quality of service provided by PLN Bombana Area is perfect. It can be concluded that sales are highly dependent on the quality of service provided by PLN. Improving service quality is the most important thing because service quality has a strong influence on competitive advantage through company characteristics. With a good service process, customers will be satisfied with the services provided.

The Effect of Electricity Tariffs on Customer Satisfaction at PLN Bombana Area

Electricity tariffs have a negative and significant effect on customer satisfaction. It concludes that if electricity tariffs increase, it will cause a significant decrease in customer satisfaction in PLN Bombana Area. This research is supported by research conducted by Qoriah (2016) which shows that the condition of service quality and tariffs on customer satisfaction is strong and good. The impact of service quality on customer satisfaction is partially positive and significant. The impact of tariffs on customer satisfaction partially has a negative and significant effect. The impact of service quality and tariffs on customer satisfaction simultaneously has a significant effect.

The Effect of Service Quality on Customer Satisfaction at PLN Bombana Area

Service quality has a positive and significant influence on customer satisfaction. This means that if the service quality is not good, then it causes a significant decrease in customer satisfaction at PLN Bombana Area. This study is supported by research conducted by Daryoso (2014) which found that service quality has a positive and significant effect on satisfaction. PT. PLN (Persero) has certain standards to improve service quality to increase customer satisfaction. This is by the vision and mission of PT. PLN (Persero) prioritizes customer satisfaction and prioritizes a culture of integrity through transparent, fast, complete, and integrity services, and always improves service quality to increase customer satisfaction.

The Effect of Customer Satisfaction on Sales of Electrical Energy at PLN Bombana Area

Customer satisfaction has a positive and significant influence on sales of electrical energy. It can be concluded that if customer satisfaction increases, then it causes an increase in sales of electrical energy at PLN Bombana. The results of this study are supported by research by Iranita (2011) which also concludes that customer satisfaction has a positive and significant effect on sales. The results of this study indicate that customer satisfaction has a positive and significant effect on the sales value of electrical energy. According to the researcher's assumptions, this happens because if someone is satisfied with what he gets, then of course it will increase in demand for what he has felt. Likewise, the state of electricity sales in the Bombana Area shows an increase in sales from year to year.

Research Limitations

The limitations of this study include:

1) This study uses secondary data, so some of the limitations and weaknesses include:
    a. The variables taken by the researcher depend on the available data, making it difficult for researchers to develop variables.
    b. The completeness, accuracy, and correctness of the analyzed data depend on the availability of secondary data, in this case, it is very dependent on the role of the party surveying conducting investigations, concluding, and recording.
    c. The data used may contain errors in entering data in the form of numbers.
2) The research period used was only 5 years of observation, namely from 2015 to 2019. In this period, there were several adjustments to electricity rates by the government.

3) The research location of the PLN Bombana Area certainly has its characteristics so that it can be different from other PLN areas throughout Indonesia. PLN areas, which have isolated electrical characteristics, rely on PLTD, and coastal areas with coconut trees such as PLN Bombana Area are generally found in the archipelago and eastern Indonesia.

Conclusions and suggestions

Conclusion

Based on the results of research on the effect of electricity tariffs and service quality on customer satisfaction and sales of electrical energy PT. PLN (Persero) Bombana Area, the following conclusions can be drawn:

1) Electricity tariffs have a positive and significant impact on the sales value of electrical energy. This concludes that if electricity tariffs increase, it will also lead to an increase in sales of electrical energy at PLN Bombana Area.
2) Service quality has a positive and significant impact on sales of electrical energy. This means that if the quality of service increases, it will cause a significant increase in sales of electrical energy at PLN Bombana Area.
3) Electricity tariffs have a negative and significant effect on customer satisfaction. This happens because PLN Bombana customers are very concerned about the expenses incurred when paying electricity bills or buying electricity tokens.
4) Service quality has a positive and significant influence on customer satisfaction. This means that if the service quality is not good, then it causes a significant decrease in customer satisfaction at PLN Bombana Area.
5) Customer satisfaction has a positive and significant influence on sales of electrical energy. Increased customer satisfaction makes customers feel comfortable and trust PLN so they don't hesitate to increase their electricity consumption.

Suggestion

According to the research results, here are some inputs for PT. PLN (Persero) in general and in particular Bombana Area:

1) PLN must be more careful in providing performance targets (KPI) to its units, this is due to many factors beyond PLN's control that can affect the realization of sales value and customer satisfaction.
2) PLN of Bombana Area must improve the quality of its services to customers because the results of the study conclude that service quality has a positive and significant effect on sales value and customer satisfaction.

Suggestions for Further Research

There are several suggestions for improving future research. These suggestions include the following:

a. Due to the limitations of this study, namely the variables taken by the researchers depended on the available data, making it difficult for researchers to develop variables, the researchers suggested to further researchers to conduct research with more other variables that are thought to affect sales and customer satisfaction.
b. The research period used was only 4 years of observation, namely 2015 to 2019. During this period, there were several adjustments to electricity rates by the government. Therefore, the researcher suggests to the next researcher to conduct research with a longer observation period to get a broader picture.

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