Service Quality Before and After the Implementation of the PLN Mobile Application at PT PLN (Persero) Customer Service Unit

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A B S T R A K

Pesatnya perkembangan teknologi informasi akhir-akhir ini sangat mempengaruhi kebutuhan masyarakat modern akan suatu layanan untuk dapat memberikan kemudahan, kecepatan, dan kepraktisan dalam memperoleh suatu produk layanan. Selain itu, situasi pandemi Covid-19 memaksa kita untuk tetap tinggal dan mengurangi aktivitas di luar saat ini untuk mengurangi klaster virus Covid-19. Karena tuntutan tersebut, perusahaan membutuhkan inovasi untuk meningkatkan kualitas pelayanan dalam menjaga kepuasan pelanggan. Penelitian ini bertujuan untuk membandingkan kualitas pelayanan pelanggan sebelum dan sesudah penerapan PLN Mobile pada PT PLN (Persero) Unit Pelayanan Kuta Badung Bali. Penelitian kuantitatif ini menggunakan metode kuesioner yang diisi melalui Google Form dengan sistem Cluster Random Sampling. Teknik analisis data menggunakan Paired Sample T-Test. Hasil penelitian menunjukkan: (1) Tingkat kualitas pelayanan pelanggan dalam Pedoman PLN dikategorikan "Cukup", artinya tidak efektif dalam mendapatkan pelayanan dari PT PLN (Persero) Kuta. (2) Tingkat kualitas pelayanan pelanggan setelah penerapan PLN Mobile dikategorikan "Sangat Tinggi", artinya pelanggan puas dalam efisiensi waktu dengan pelayanan PLN dari PT PLN (Persero) Kuta. (3) Terdapat pengaruh yang kuat dengan perbedaan yang signifikan terhadap kualitas pelayanan pelanggan sebelum dan sesudah penerapan PLN Mobile.

A B S T R A C T

The rapid development of information technology recently has greatly influenced the needs of modern society for a service to be able to provide convenience, speed, and practicality in obtaining a service product. Besides, the situation of the Covid-19 pandemic has forced us to stay and reduce the outside activities nowadays for decreasing the clusters of the Covid-19 virus. Due to the demands, the company needs innovation to improve the service quality in keeping the satisfaction of the customer. This study was aimed to compare the service quality of customer before and after the implementation of the PLN Mobile at PT PLN (Persero) Kuta Badung Bali Service Unit. This quantitative research used a questionnaire method filled in via Google Form with a Cluster Random Sampling system. The data analysis technique used Paired Sample T-Test. The results showed: (1) The level of customer service quality in the PLN Manual was categorized as "Enough", means that it was ineffective in getting services from PT PLN (Persero) Kuta. (2) The level of customer service quality after the implementation of the PLN Mobile is categorized as "Very High", means that customers are satisfied in the efficiency time with PLN's services from PT PLN (Persero) Kuta. (3) There was a strong influence with a significant difference on the quality of customer service before and after the implementation of the PLN Mobile.

1. INTRODUCTION

The rapid development of information technology recently has greatly influenced the needs of modern society for a service to be able to provide convenience, speed, and practicality in obtaining a service product (Alfi & Nur, 2017; Bulan, 2016). Besides, the situation of the Covid-19 pandemic has forced us to stay and reduce the outside activities nowadays for decreasing the clusters of the Covid-19 virus (Mentang et al., 2021; Rohman & Abdul, 2021; Rudiansyah et al., 2022). Due to the demands, the company needs innovation to improve the service quality in keeping the satisfaction of the customer

(Alvianna et al., 2021; Indra & Siagian, 2021). Service quality shows a measure of how well the services provided by an organization or company meet customer expectations and satisfaction (Pakurár et al., 2019; Ramadhan, 2016). Customer satisfaction is the level of a person after comparing the perceived performance (results) compared to expectations (Darmawan & Ekawati, 2017; Kim, 2011). Thus, the needs of service recipients must be met, therefore they can obtain appropriate satisfaction (Morgan & Rego, 2006; Oeyono, 2013). Therefore, the companies need to know customer satisfaction and the quality of services provided.

There are five dimensions of service quality (Kotler & Keller, 2016), namely (Reliability, which is the company's ability to perform the promised services reliably and accurately (Khoirista, 2015); (2) Tangibles, the appearance of physical facilities, equipment, means of communication, and the appearance of the employee (Alnaser et al., 2018); (3) Responsiveness, a willingness to help customers and provide prompt service (Wang, 2011); (4) Assurance, the knowledge, and courtesy of employees and the ability of employees to convey trust and confidence (Krisnanda & Rastini., 2018); (5) Empathy, attention, special attention given to customers (Tjiptono & Chandra, 2019). Research related to service quality at PT PLN (Persero) has also been carried out, including; first, discusses about the Service Quality Analysis at PT PLN (Persero) Sukabumi area, where customers have high expectations of service performance (Afriyadi & Anggreyany, 2021). Other study discusses the Effect of Service Quality and Innovation on Customer Satisfaction at PT PLN (Persero) Manado Area, with the results of research that service quality and innovation affect customer satisfaction at PT PLN (Persero) Manado area, service quality and innovation has a simultaneous effect on customer satisfaction at PT PLN (Persero) Manado area (Rahman, 2019).

Along with the growth of technology and the era in the digital era as it is today, PT PLN (Persero), as a government business entity in the field of electricity services prioritizes customer satisfaction through the process of digitizing service patterns. This is done so that electricity can be enjoyed by all parties and contribute greatly to people's lives, as well as to create an efficient service pattern, which can be accessed anywhere, anytime and in real time. For this reason, PLN continues to transform services by launching the PLN Mobile application. The PLN customer service system before the launch of the PLN Mobile application used a system where customers went directly to the nearest PLN service office or through the Call Center 123. However, along with the development of technology, this system is deemed less effective because if a customer calls Call Center 123, the customer will be charged a fee that incriminates the customer so that the customer chooses to visit the nearest PLN service office. Exactly in March 2020, Indonesia experienced the Covid-19 pandemic, in which it was feared that offices could become clusters of transmission of the Covid-19 virus. Responding to these demands, PLN developed an information technology-based service product called the PLN Mobile Application that is a customer-focused on service transformation, namely a strategy implemented to serve customers better.

Heretofore, PLN has not evaluated the service of PLN Mobile, so that it does not yet know the effectiveness and usefulness, as well as the quality of service with this feature. Besides that, to find out whether or not the use of PLN Mobile is effective in the community today, it is necessary to have a test to compare the use of PLN Manual with PLN Mobile. Based on the description of the problem above, this study discussed in describing the quality of customer service before and after the implementation of the PLN Mobile application. Moreover, empirically tested the effect of implementing the PLN Mobile application on the quality of customer service for PT PLN (Persero) Kuta Badung Bali Service Unit

2. METHODS

In this study, the author used a quantitative exploratory research design (Creswell, 2007; Sugiyono, 2014). The research location is PT PLN (Persero) Kuta Customer Service Unit. The subjects in this study were customers of PLN Kuta. The object of this research was the quality of service due to the influence of the application of the PLN Mobile application. The population in this study was the number of customers of PT PLN (Persero) Kuta Customer Service Unit in Kuta District, North Kuta and South Kuta, Badung Regency, Bali as many as 200 samples with a calculation formula using the Slovin formula. The data collection technique used a questionnaire method that was filled in via Google Form with a Cluster Random Sampling system. The data analysis technique used Paired Sample T-Test. The researchers had taken this topic to know the effect of the implementation of the PLN Mobile application on the quality of PLN customer service. This study consists of one variable, called the quality of customer service PT PLN (Persero) Customer Service Unit Kuta Badung Bali.

Descriptive statistics are statistics used to analyse data by describing the data that has been collected as it is without the intention of making generally accepted conclusions, which in this study is to describe problems, among others. Quality of customer service before the implementation of the PLN Mobile application. The quality of customer service after the implementation of the PLN Mobile

application. The two-paired difference test statistic is one of the methods of testing the hypothesis where the data used is not independent, which is characterized by the existence of a value relationship in each of the same samples (pairs). The first treatment may be in the form of control, which does not give any treatment at all to the object of research, which in this study is to describe the problem of the effect of implementing the PLN Mobile application on the quality of customer service at PT PLN (Persero) Kuta Badung Bali Service Unit. The description of M_1 is the service before the PLN Mobile application and M_2 is the service after the PLN Mobile application. It can be concluded that the hypothesis will be rejected if H_0 if p-value < = 0.05 or if calculated > t table. Meanwhile, the hypothesis will be accepted if H_0 if p-value > = 0.05 or if calculated < t table.

3. RESULTS AND DISCUSSIONS

Results
Validity Test
In this study, validity test is used to determine the feasibility of the items in a list of questions in defining a variable. If the value of the validity of each answer obtained when providing a list of questions is greater than 0.3, then the question item can be said to be valid (Sugiyono, 2014). Because of the results of Pearson Correlations on each statement item show a value that is above 0.3, the research can be said to be valid. Judging from the r count and r table, if r arithmetic ≥ r table (2-sided test with sig. 0.05) then the instrument or question items have a significant correlation with the total score (declared valid). The results of the validity test, showed that all indicators in this study which include reliability, tangibles, responsiveness, empathy, and assurance are said to be valid because they have comparison of p value with alpha value (α) with a p value of 0.000 which is smaller than 0.05.

Reliability Test
In this study, the reliability test on a research instrument is a test used to determine whether a questionnaire used in collecting research data can be said to be reliable or not. The reliability test of this study was carried out using Cronbach's Alpha analysis. Reliability testing is determined by calculating the amount of Cronbach's alpha, where the instrument can be said to be reliable if it already has a Cronbach's alpha coefficient > 0.60. Based on the results of the instrument reliability test, it can be seen that each of the variables in this study reliability (reliability), Tangibles (physical evidence), Responsiveness (sensitivity), Empathy (empathy), and Assurance (guarantee) can be said reliable because each variable has a Cronbach's alpha value greater than 0.60.

Descriptive Statistics
Descriptive statistics are statistics used to analyse data by describing the data that has been collected as it is without the intention of making generally accepted conclusions. Descriptive analysis showed that the statistical summary results from the two data samples called service quality data before the PLN Mobile Application (Manual) was applied and service quality data after the PLN Mobile Application was implemented. It can be seen that the average value (Mean) of PLN Manual is 2.0869 and PLN Mobile is 4.2738. The mean or average before the implementation of the PLN Mobile (Manual) application of 2.0869 was between the mean scale of 2 - 2.9 which means that the service quality of PT PLN (Persero) Kuta Badung Bali Service Unit was in the "Enough" category. While the mean after the implementation of the PLN Mobile application of 4.2738 is between the mean scale of 4 - 4.9 which means the service quality of PT PLN (Persero) Kuta Badung Bali Service Unit is in the "Very High" category. It can be concluded that the average implementation of the PLN Manual is smaller than the average implementation of the PLN Mobile application of 2.1869, which indicates that the number of mean increases in the implementation of the PLN Mobile Application.

Two Paired Sample T-Test
This analysis is used to determine the strengths and weaknesses of the relationship between service quality data before the PLN Mobile Application (Manual) is applied and service quality data after the PLN Mobile Application is implemented. Based on the results of the analysis, the correlation coefficient (R) is 0.605. Furthermore, based on the high-low relationship, the correlation coefficient (R) of 0.605 lies between 0.401 - 0.700 that means the correlation is quite strong/high. The data had revealed that the significant value of the output is 0.000 which means that the probability value is still below 0.05. It can be concluded that there is a strong or high positive correlation between service quality before and after the implementation of the PLN Mobile Application at PT PLN (Persero) Kuta Badung Bali Service Unit.

Paired Sample T-Test

The hypothesis testing used in this study is a parametric statistical test, namely the Paired Sample T-test. Paired t-test is one of the methods of testing the hypothesis where the data used is not independent which is characterized by the existence of a value relationship in each of the same samples (pairs). Paired samples can be interpreted as a sample with the same subject but experiencing two different treatments or measurements, namely measurements before and after a treatment. Hypothesis testing using paired t-test was conducted to determine whether the customers of PT PLN (Persero) Kuta Badung Bali Service Unit before and after implementing the PLN Mobile application had a significant effect on improving the quality of PLN services. The result of data analysis showed that the significance level of this test is 5%. The basis for making decisions on the proposed hypothesis is if the value of sig. 2 (tailed) < 0.05 then ho is rejected, and vice versa. It can be seen from table 4.5, the value of sig. 2 (tailed) is 0.000 where this value is less than 0.05, so ho is rejected and ha is accepted. Therefore, it can be concluded that there is a significant difference in service quality between before the PLN Mobile Application (Manual) was applied and after the PLN Mobile Application was implemented at PT PLN (Persero) Kuta Badung Bali Service Unit.

Discussion

The Quality of Customer Service PT PLN (Persero) Kuta Service Unit Badung Bali Before the Implementation of the PLN Mobile Application. Based on the results of descriptive statistical tests, the average before the implementation of the PLN Mobile application showed a smaller value, namely 2.0869. This shows that the average value before the implementation of the PLN Mobile Application has a quality category that is considered "Enough" with customer service at PT PLN (Persero) Kuta Badung Bali Service Unit. The quality category which is considered "Enough" here means that customers are satisfied with PLN's services, but are still not effective and efficient in getting services or services from PLN. When customers apply PLN Manual, PLN customers must go to the dominant PLN central service office, which is quite far from where they live. In addition, PLN customers can only contact Customer Service via the Call Center telephone which is of course ineffective because it takes time to wait for the service queue to submit complaints regarding additional power and report power outages. It can be said that the services of PT PLN are still carried out optimally, but of course, there are many things that must be sacrificed for PLN customers, such as the cost of gasoline, credit, time and energy. Based on the description above, the decline in the application of PLN Manual by PLN customers who directly conduct transactions or seek information from Customer Service shows several factors, one of which is the Covid-19 pandemic. In the midst of a pandemic like today, it requires everyone to switch from conventional orders and habits to being digital. Therefore, PLN needs to realize innovations so that customers can get service easily and quickly.

The Quality of Customer Service PT PLN (Persero) Kuta Service Unit Badung Bali Before the Implementation of the PLN Mobile Application.

Based on the results of descriptive statistical tests, the average after the implementation of the PLN Mobile application shows a greater value of 4.2738 as "Very High" category than the average after the implementation of the PLN Mobile application. Therefore, it can be interpreted that after the implementation of the PLN Mobile application at PT PLN (Persero) Kuta Badung Bali Service Unit, there was an increase in the quality of customer service. The quality category, which is mentioned as "Very High" here, means that the customer is satisfied with PLN's services for the efficiency of time to get service or service from PLN. When customers apply PLN Mobile, PLN customers do not need to go to the PLN central service office to submit complaints regarding additional power and report power outages. It is enough with the PLN Mobile Application, which provides a variety of services and information that is fast and accurate only at the hands of PLN customers, has provided optimal service without having to sacrifice other things such as the cost of gasoline, credit, time and energy. Therefore, with the latest innovation from PT PLN in launching the PLN Mobile Application, it has improved the quality of PLN customer service.

In addition, the emergence of the 4.0 revolution has changed our lifestyle in various sectors, such as helping our daily work with the sophistication of today's technological tools in carrying out their operations. Therefore, the PLN Mobile application has demonstrated the ability to be able to transfer data quickly and accurately over the network without the need for human interaction. Then, the factors that support using the PLN Mobile Application due to the Covid-19 pandemic situation which requires us to work or do more activities at home, so that PLN customers do not need to spend a lot of time to come directly to the central service office. This must be done to prevent the occurrence of clusters of transmission of the Covid-19 virus. Therefore, PLN innovates to encourage customer service indirectly, by

launching the PLN Mobile application on December 18, 2020. The PLN Mobile application is expected to reduce face-to-face customer service without reducing the level of quality and service quality.

The Quality of Customer Service PT PLN (Persero) Kuta Service Unit Badung Bali Before the Implementation of the PLN Mobile Application.

Based on the results of the paired t-test (Paired Sample Test), the value of sig. 2 (tailed) is 0.000 where this value is less than 0.05, so ho is rejected and ha is accepted. So, it can be concluded that there are significant differences in the use of PLN Mobile before and after the implementation of PLN Mobile at PT PLN (Persero) Service Unit Kuta Badung Bali. Based on the high-low relationship, the correlation coefficient (R) of 0.605 lies between 0.401 - 0.700 which means the correlation is quite strong/high. Then, a significance value of 0.000 where the probability value is still below 0.05 indicates a strong or high positive correlation between service quality before and after the implementation of the PLN Mobile Application at PT PLN (Persero) Kuta Badung Bali Service Unit. Based on this description, it can be concluded that there is a strong or high influence on the application of the PLN Mobile application with a significant difference between PLN Manual and PLN Mobile on the quality of customer service at PT PLN (Persero) Kuta Badung Bali Service Unit.

Service quality shows a measure of how well the services provided by an organization or company meet customer expectations and satisfaction (Pakurár et al., 2019; Ramadhan, 2016). Customer satisfaction is the level of a person after comparing the perceived performance (results) compared to expectations (Darmawan & Ekawati, 2017; Kim, 2011). Thus, the needs of service recipients must be met, therefore they can obtain appropriate satisfaction (Morgan & Rego, 2006; Oeyono, 2013). Therefore, the companies need to know customer satisfaction and the quality of services provided. There are five dimensions of service quality (Kotler & Keller, 2016), namely (Reliability, which is the company's ability to perform the promised services reliably and accurately (Khoirista, 2015); (2) Tangibles, the appearance of physical facilities, equipment, means of communication, and the appearance of the employee (Alnaser et al., 2018); (3) Responsiveness, a willingness to help customers and provide prompt service (Wang, 2011); (4) Assurance, the knowledge, and courtesy of employees and the ability of employees to convey trust and confidence (Krisnanda & Rastini., 2018); (5) Empathy, attention, special attention given to customers (Tjiptono & Chandra, 2019). Research related to service quality at PT PLN (Persero) has also been carried out, including; first, discusses about the Service Quality Analysis at PT PLN (Persero) Sukabumi area, where customers have high expectations of service performance (Afriyadi & Anggreyany, 2021). Other study discusses the Effect of Service Quality and Innovation on Customer Satisfaction at PT PLN (Persero) Manado Area, with the results of research that service quality and innovation affect customer satisfaction at PT PLN (Persero) Manado area, service quality and innovation has a simultaneous effect on customer satisfaction at PT PLN (Persero) Manado area (Rahman, 2019).

4. CONCLUSION

Based on the formulation of the problem and discussion of the research results that have been described in the previous chapter, the conclusions generated are as in, (1) The level of customer service quality in the PLN Manual is categorized as "Enough" which means it is still not effective and efficient in getting services from PT PLN (Persero) Kuta Badung Bali Service Unit. (2) The level of customer service quality after the implementation of the PLN Mobile application is categorized as "Very High" which means that customers are satisfied with PLN's services for time efficiency to get service or service from PT PLN (Persero) Kuta Badung Bali Service Unit. (3) There is a strong influence with a significant difference on the quality of customer service before and after the implementation of the PLN Mobile Application at PT PLN (Persero) Kuta Badung Bali Service Unit.

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