

The Influence of Service Quality, Customer Trust, Promotion, Use of the PLN Mobile Application on Customer Satisfaction PT. PLN (Persero) UP3 Palu (Case Study on PLN Mobile Application Users, PLN Kamonji Customer Service Unit)

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Abstract: Customers are assets that play an important role in determining the success of the company. Meeting customer needs which is an important goal for PT. PLN (Persero) UP3 Palu. To meet customer satisfaction there needs to be an improvement in service quality which refers to customer satisfaction as the main goal in providing services. This study aims to analyze service quality, customer trust, promotions, and the use of the PT PLN (Persero) Mobile application at the Kamonji Customer Service Unit on the PLN Mobile Application on customer satisfaction provided. The analytical method used is validity, reliability, classical assumptions and multiple regression using the SPSS 25 application. The results show that partially Service Quality, Customer Trust, Promotion, and Application Usage has a positive and significant effect on Customer Satisfaction. Simultaneously Service Quality, Customer Trust, Promotion, and Application Usage have a significant effect on PT. PLN (Persero) UP3 Palu. (Case Study on PLN Mobile Application Users, PLN Kamonji Customer Service Unit).

Keywords: Service Quality, Customer Trust, Promotions, Application Usage, Customer Satisfaction.

INTRODUCTION

Background

The current era of globalization requires companies to improve their services professionally according to their respective fields. Changes in technology and the very fast flow of information have encouraged companies to produce products or services that can meet the needs and desires of consumers, so that consumers feel satisfied with what they have got from the company. There are many ways that companies can do to meet the needs and desires of consumers, one of which is by giving a good impression/image in terms of products and services to consumers. Service quality is built on a comparison of two main factors, namely the customer's perception of the actual service they receive (perceived service) with the actual service expected/desired. Customers will feel satisfied if the customer's wishes have been fulfilled by the company as expected. With the added value of a product, customers will be more satisfied and the possibility of being a customer of a product for a long time will be very large. Conversely, customers who are dissatisfied with the quality/service provided, will naturally tell others as complaints about their dissatisfaction.

Trust is the willingness of customers to trust or rely on a brand in a risky situation because of the hope that the brand will provide positive results. Consumer trust in PLN Mobile is associated with the customer's willingness to accept risks in the hope that the customer will obtain value that meets or exceeds his expectations. In addition to customer trust, one of the factors that influence customer satisfaction is promotion. With the company's promotion aims to be able to persuade consumers to make purchases of products that are marketed. The main purpose of promotion is to provide information, attract the attention of consumers and then influence so that purchases occur. Creative and fresh promotion strategies can attract consumers to see the goods or services offered and then make purchases. Companies that can carry out promotions well will also increase company sales. Promotion can be done through print or electronic media. Promotions given will provide satisfaction for consumers because consumers feel they get added value from the goods or services offered.

The PLN Mobile application is an application created specifically to make it easier for customers to access various PT PLN (Persero) services, starting from purchasing electricity tokens, paying electricity bills, recording independent meters, applying for additional power and installing new electricity, to complaints of disturbances that can be monitored on an ongoing basis. realtime how the process of handling disturbances is complete (Adina & Nasution, 2021). This aims to make it easier for customers to communicate digitally about the various needs for electricity utilization services from PT PLN (Persero) in today's all-digital era (Mboeik et al., 2020). The New PLN Mobile application as of August 2021 has been downloaded by more than 5,000,000 users on the Google Play Store platform with 100,277 reviews. The New PLN Mobile application also received a rating of 4.1 at the Apple Store, making the New PLN Mobile application occupy the sixth position in the top business chart with 2,010 reviews. When compared with the number of PLN customers throughout Indonesia, which has reached 79,000,033 subscribers, the number of users of the New PLN Mobile application is still very small. The Palu Customer Service Implementation Unit (UP3) is one of the Executing Units in the North Sulawesi, Central Sulawesi and Gorontalo Main Units. PT PLN (Persero) UP3 Palu serves 7 Regencies / Cities in the Province of Central Sulawesi, namely Palu City, Donggala Regency, Sigi Regency, Parigi Moutong Regency, Poso Regency, North Morowali Regency and Morowali Regency.

There are 10 Customer Service Units (ULP) in the Palu Customer Service Implementation Unit, namely ULP Palu City, ULP Kamonji, ULP Tawaeli, ULP Tambu, ULP Donggala, ULP Parigi, ULP Poso, ULP Tentena, ULP Kolonedale and ULP Bungku. The Kamonji Customer Service Unit (ULP) is one of the service units in the PLN UP3 Palu work area, which mostly serves customers in Palu City, Donggala Regency and Sigi Regency, Central Sulawesi Province. The number of PT PLN (Persero) ULP Kamonji customers as of June 2022 is 66,846 customers or 13.06% of the total number of PLN UP3 Palu customers (data source: AP2T PLN).

Table 1. Number of Customers per PLN ULP Kamonji Tariff

No	Rates	2019	2020	2021	2022
1	Social	3,655	3,691	3,386	3,388
2	Household	50,985	54,895	58,410	60,160
3	Business	2,916	3010	3,062	3,081
4	Industry	28	31	37	42
5	Government	127	139	150	151

6	Special Service	24	24	24	24
Total Customers		57,735	61,790	65,069	66,846

Source: AP2T PLN (2022)

Household tariff customers still dominate the total composition of PLN ULP Kamonji customers 60,160 customers until June 2022 or equal 90% of the total PLN ULP Kamonji customers. Data on the total number of downloaders or users of the PLN Mobile PLN UP3 Palu application as of June 2022 is still around 20.26% of the total household tariff customers or 95,039 customers with the highest number of downloaders in the Kamonji Customer Service Unit, namely 15,297 customers or 25, 43% of the total PLN ULP Kamonji household tariff customers (data source: AP2T PLN).

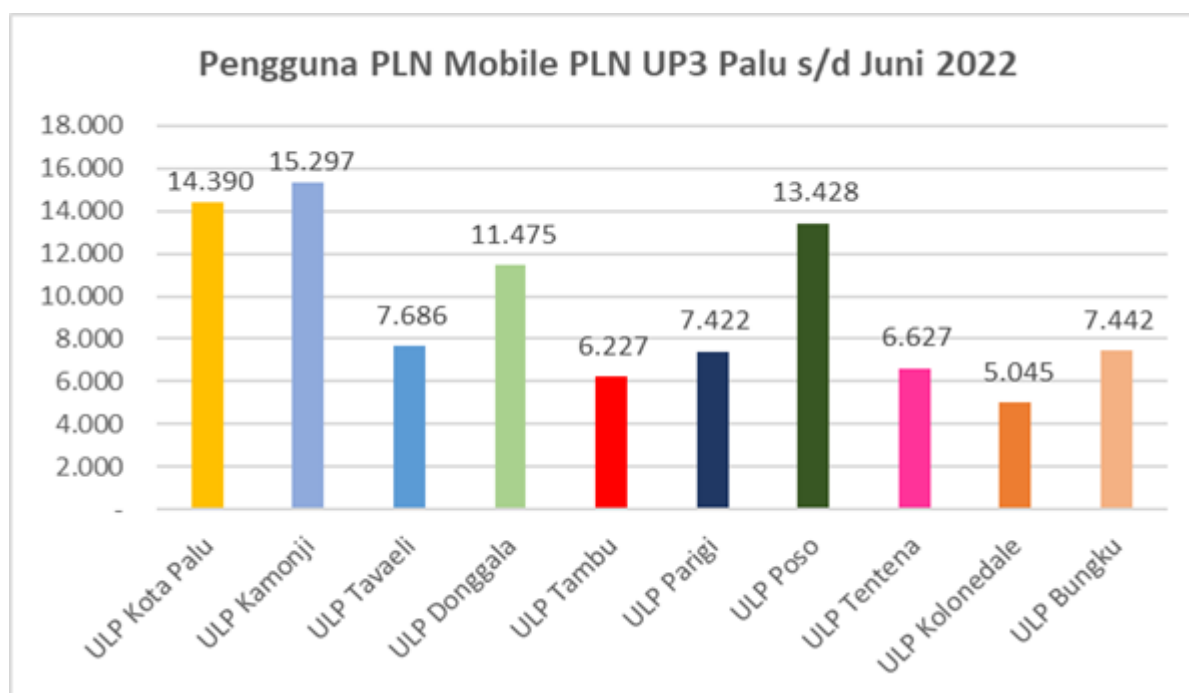


Figure 1. Graph of PLN Mobile PLN UP3 Palu Users as of June 2022

Source: Processed data (2022)

Since 2020 PT PLN (Persero) has continued to promote promotions related to the use of the PLN Mobile application, especially the disturbance complaint service which can report power failures through the PLN Mobile application with a fast response service because it is already integrated with the PLN Command Center and customers can directly monitor the position of PLN officers through the application. Through the PLN Mobile application, customers can also receive blast information related to power outages, both planned outages (maintenance of PLN assets) and outages due to power grid disturbances.

The number of PLN ULP Kamonji customer complaints via the PLN Mobile application has continued to increase since 2021. This shows that the socialization of the transfer of customer complaint services from the conventional method (coming to the PLN office) and through Contact Center 123 to complaints via PLN Mobile has been carried out by PLN to make it easier customers in making complaints both disturbances and complaints.

Complaints about disturbances and complaints from PLN ULP Kamonji customers are still dominated by reports related to power outages, new installation services and changes in power (source: APKT PLN disturbance and complaints reports).

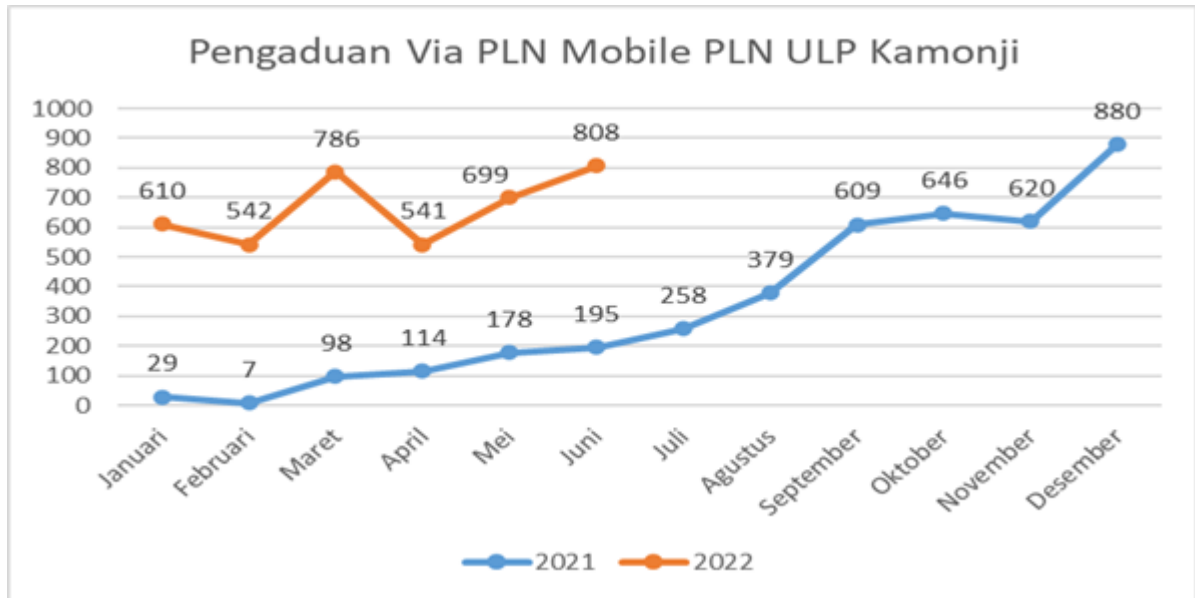


Figure 2. Graph of the Number of Customer Complaints Via PLN Mobile PLN ULP Kamonji

Source: PLN APKT data (2022)

The problem that arises from the PLN Mobile service product is that there is still a negative rating by customers on the quality of PLN Mobile services, where a total of 146 customers who reported via the PLN Mobile application gave a negative rating (1 star) for the period January 2021 – June 2022 (source: APKT -PLN EIS). Negative ratings are given by customers because there are still PLN services that do not meet customer expectations, for example, the response to complaints is slow, the quality of technical service personnel does not meet customer expectations and the duration of outages is long enough so that there is the potential for repeated complaints from customers.

Table 2. Number of PLN Negative Ratings Mobile UP3 Hammer

Month	2021	2022
January	6	6
February	1	4
March	11	5
April	6	5
May	19	4
June	8	5
July	4	5

August	8	
September	7	
October	9	
November	16	
December	17	
Total	112	34

Source: APKT – PLN EIS (2022)

Ratings related to the PLN Mobile application also still get a rating of 4.8 on the Android Play Store and 4.6 on the App Store on IOS. This shows that the level of customer satisfaction with the PLN Mobile application still needs to be improved and service quality improved. Based on the background description above, the authors will conduct research with the title "The Influence of Service Quality, Customer Trust, Promotion and Use of PLN Mobile Applications on Customer Satisfaction (Case Study on PLN Mobile Application Users Kamonji Customer Service Unit)".

Research purposes

1. To analyze the effect of the digital service quality of the PLN Mobile application on customer satisfaction of PT PLN (Persero) UP3 Palu ULP Kamonji.
2. To analyze the effect of digital customer trust in the PLN Mobile application on customer satisfaction of PT PLN (Persero) UP3 Palu ULP Kamonji.
3. To analyze the effect of the digital promotion of the PLN Mobile application on customer satisfaction of PT PLN (Persero) UP3 Palu ULP Kamonji.
4. To analyze the effect of using the PLN Mobile digital application on customer satisfaction PT PLN (Persero) UP3 Palu ULP Kamonji.
5. To analyze the effect of the digital service quality of the PLN Mobile application on customer satisfaction of PT PLN (Persero) UP3 Palu ULP Kamonji.
6. To analyze the effect of Service Quality, Customer Trust, Promotion and Use of the PLN Mobile digital application together on Customer Satisfaction of PT PLN (Persero) UP3 Palu ULP Kamonji.

LITERATURE REVIEW

Marketing Management

According to Kotler and Keller (2017: 6), marketing management is a target market to attract, retain and increase consumers by creating and providing good quality sales. According to Assauri (2018: 12), marketing management is an activity of creating, preparing, implementing plans carried out by the company to generate profits. Based on several definitions of marketing management above, the authors arrive at understanding that marketing management is the science and art of planning, analyzing, implementing and controlling programs designed to reach target markets, maintain and satisfy as well as fulfill customer desires in order to achieve company goals.

Service Marketing

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According to Manullang (2016: 3) service marketing is something that can be identified separately/not realized, which is used to meet needs. Service marketing is something that can be identified separately / intangible, which is used to meet needs. Services can produce tangible or intangible objects. Based on several definitions Service marketing is part of a service system, encompassing the whole in which service providers have some form of contact with their customers, from advertising to billing, when doing things that involve providing contact or delivering services.

Service Quality Indicators

According to Cesariana, Juliansyah and Rohani (2022) service quality indicators, namely:

1. *Reliability*, namely the ability to provide services to customers as promised quickly, accurately and satisfy customers.
2. *Responsiveness*, namely the initiative and availability of employees to provide fast and responsive service to customers.
3. *assurance*, includes knowledge, competence, courtesy, and trust obtained from employees, free from physical harm, risk or hesitation.
4. *empathize*, includes comfortable relationships, effective communication, personal attention, and understanding the individual needs of customers.
5. *Tangibles*, includes physical facilities, devices, workers, and means of communication.

Customer trust

The term "trust" refers to a mental state characterized by a willingness to "accept vulnerability" and is based on "expectations of beneficial intentions or behavior" from other parties involved in online business transactions (Rafiah, 2019). Rafiah (2019) concluded that there is a positive and significant relationship between trust and a person's level of satisfaction. By definition above is the belief that consumers have in the company, product, service or services offered to them. This belief can include the features, benefits, and quality of the product itself.

Customer Trust Indicator

According to Kasinem (2020) states that indicators of trust consist of:

1. Integrity. Consumer perception that the company follows acceptable principles, such as keeping promises, behaving ethically, and being honest. The integrity of the company is determined by the consistency of the company in the past, the credibility or lack of communication of the company with other groups, and the conformity of the company's actions with its promises or statements.
2. Benevolence, based on the amount of trust in a partnership with goals and motivations that provide benefits to other organizations when new conditions arise, especially conditions where commitment is not formed.
3. Competence. Competence is the ability to solve problems faced by consumers and meet all their needs. Capabilities refer to the skills and characteristics that enable a group to exert dominant influence.

Promotion

According to Yulianto (2020), promotion is an effort made by marketing to inform and influence other people or parties to be interested in making transactions or exchanging products or services being marketed. According to Herlambang and Komara (2022), promotion can refer to technology or various different methods that aim to sell products or companies that convey information about their products to consumers. Based on the definition of promotion, it can be concluded that promotion is an important

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activity in marketing a product or service so that it can attract customers. To buy the product, promotional activities must be designed as attractive as possible and the information conveyed must be easy for the public to understand and be interested in buying the product.

Promotion Indicator

Darmawan et al., (2019) states that the indicators of sales promotion variables consist of: Promotion frequency, Promotion quality, Quantity, Promotion, and Promotion time

Application Users

Mobile applications are a product of mobile computing systems, namely computing systems that can be used while they are being moved (Rahardja, et al (2017). Mobile applications are also known as applications that can be downloaded as well as can add to the functionality of the mobile device itself. Applications for Complaints and Integrated Complaints (APKT) is an application used for managing network operations, network distribution, recording and recovery from customer disturbances and complaints. Management is carried out online, realtime, and integrated with other PLN business processes (PLN, 2019).

Indicators for Using the PLN Mobile Application

1. There are various service features in the PLN Mobile application
2. The service features in the PLN Mobile application are quite complete according to customer needs
3. Customers can easily and quickly access all PLN services using the PLN Mobile Application
4. The trouble information feature and the giving of ratings (feedback) to PLN Mobile application officers are very useful
5. The PLN Mobile application can meet user needs in making transactions.
6. Using the PLN Mobile application is very easy to use.

Customer satisfaction

According to Oliver (2019) satisfaction is the level of one's feelings after comparing the performance/results he feels with expectations, so that the level of satisfaction is a function of the difference between perceived performance and expectations, if expectations are then customers will be disappointed. If performance matches expectations, the customer will be very satisfied; if performance exceeds expectations, the customer will be very satisfied. Consumer expectations can be shaped by past experience, comments from relatives, and marketer information and is up to date. According to Kotler (2017) consumer satisfaction is a person's feeling of pleasure or disappointment that arises after comparing their perceptions/impressions (performance or results) of products and their expectations.

Based on the above understanding it is concluded that satisfaction Customer assessment is an assessment of each consumer by comparing the existing conditions with the expected conditions. If the product or service provided by the company is in accordance with expectations, the customer will be satisfied. Conversely, if the product or service provided by the company does not match customer expectations, the customer will feel disappointed.

Customer Satisfaction Indicator

According to Kasinem (2020), the following are indicators of customer satisfaction:

1. Conformity of expectations, is the level of conformity between expected product performance and

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what is felt by the customer, including: products obtained that meet or exceed expectations, services by employees that meet or exceed expectations, and support facilities that meet or exceed expectations.

2. Interest in revisiting, is a willingness to revisit or repurchase related products, including: interest in revisiting because the services provided by employees are satisfactory, interest in revisiting because of the value and benefits obtained after consuming the product and interest in revisiting because the supporting facilities provided are adequate.
3. Willingness to recommend, is the willingness of customers to recommend products they have experienced to friends or family, including: Suggesting friends or relatives to buy the products offered because of satisfactory service, Suggesting friends or relatives to buy the products offered because the supporting facilities provided are adequate, and Suggesting friends or relatives to buy the product offered because of the value or benefits obtained after consuming a service product.

Previous research

Bramanaty, Tumbuan and Djurwati (2023) in this study entitled The Effect of Service Quality on Customer Satisfaction of PT PLN (Persero) Paniki Customer Service Unit on the PLN Mobile application. The results of the study show that simultaneously Physical Evidence, Reliability, Responsiveness, Assurance, Empathy have a positive and significant effect on Customer Satisfaction at PT PLN (Persero) Paniki Customer Service Unit. Partially each of the variables Physical Evidence, Reliability, Responsiveness, Assurance, and Empathy has a positive effect on Customer Satisfaction at PT PLN (Persero) Paniki Customer Service Unit.

Aprianti, Maharani and Utama (2022), research entitled The Effect of Service Quality on Customer Satisfaction at PT. PLN (Persero) Studies on the Sumbawa Besar Customer Implementation Unit. The results showed that service quality consisting of reliability (X1), responsiveness (X2), assurance (X3), empathy (X4), and tangible (X5) had a positive effect on customer satisfaction using PT. services. PLN (Persero) Customer Service Implementation. Unit (UP3) Sumbawa Besar, either partially or jointly. That is the degree of influence of service quality consisting of reliability (X1), responsiveness (X2), assurance (X3), empathy (X4), and tangible (X5) on customer satisfaction using PT. PLN (Persero) Customer Service Implementation Unit (UP3) Sumbawa Besar is 61.2%,

Rahmatika and Madiawati (2020), research entitled The Influence of E-Service Quality and Promotion on Customer Loyalty through Customer Satisfaction as PLN Mobile Intervening Variables. The results of this study indicate that the E-Service Quality (X1) and Promotion (X2) variables have a partial effect on Customer Satisfaction (Y), the Customer Satisfaction variable (Y) has a partial effect on Customer Loyalty (Z). Simultaneously there is the influence of E-Service Quality (X1) and Promotion (X2) on Customer Satisfaction (Y). In terms of intervening variables, there is the effect of E-Service Quality (X1) and Promotion (X2) which have a direct effect on Customer Satisfaction (Y).

Research Model and Hypothesis

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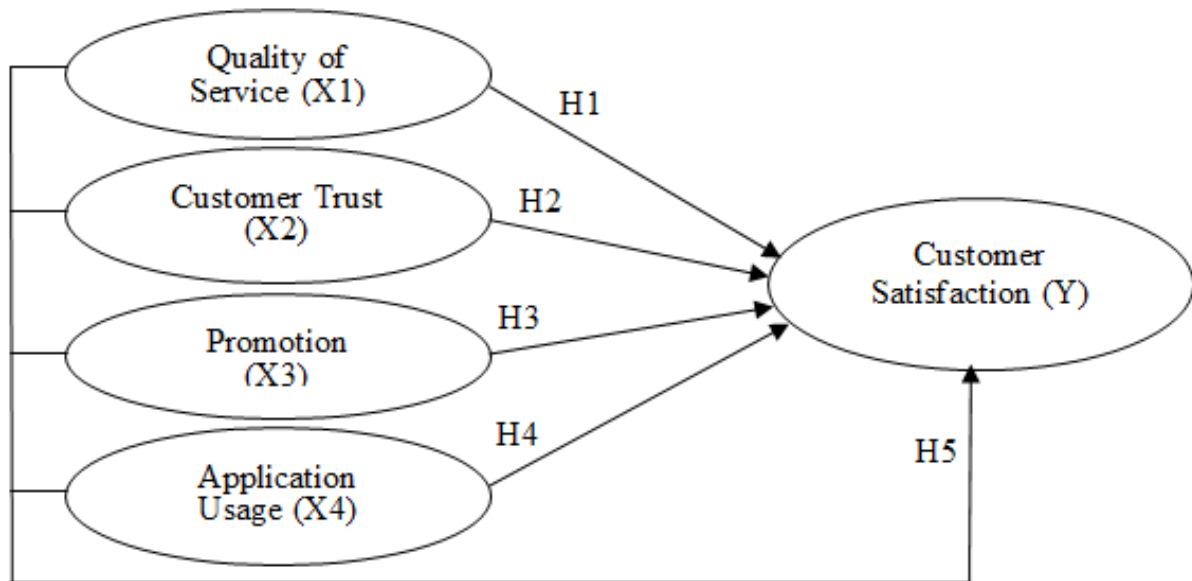


Figure 3. Research Model

Source: Theoretical Studies and Empirical Studies (2022)

hypothesis

H1: It is suspected that there is a positive influence of Service Quality (X1) on Customer Satisfaction (Y) inPT PLN (Persero) UP3 Palu ULP Kamonji.

H2: It is suspected that there is a positive influence on customer trust (X2) on customer satisfaction (Y).PT PLN (Persero) UP3 Palu ULP Kamonji.

H3: It is suspected that there is a positive influence of Promotion (X3) on Customer Satisfaction (Y) atPT PLN (Persero) UP3 Palu ULP Kamonji.

H4: It is suspected that there is a positive influence on the use of the PLN Mobile Application (X2) on Customer Satisfaction (Y) inPT PLN (Persero) UP3 Palu ULP Kamonji.

H5: It is suspected that there is a positive influence of Service Quality (X1), Customer Trust (X2), Promotion (X3), Use of the PLN Mobile Application (X4) together on Customer Satisfaction (Y) inPT PLN (Persero) UP3 Palu ULP Kamonji.

RESEARCH METHODS

According to Sugiyono (2018; 13) quantitative data is a research method that is based on positivistic (concrete data), research data is in the form of numbers that will be measured using statistics as a counting test tool, related to the problem being studied to produce a conclusion. This research is a research with the type of problem in the form of two or more variables to identify facts or events. The variables that affect the independent variables are Service Quality, Customer Trust, Promotion, and Use of the PLN Mobile Application while the dependent variable is Customer Satisfaction.

Location and Research Object

This research takes a limited case study in the work areaPT PLN (Persero) UP3 Palu ULP Kamonji.The reason for choosing this research location is becausePT PLN (Persero) UP3 Palu ULP Kamonjihave

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different characteristics of household customers from subsidized housing to luxury housing. Based on these considerations, the researcher is interested in conducting this research at that location.

Method of collecting data

The data collection method in this study used a questionnaire (Google Forms) which is a data collection technique by providing a set of questions or written questions to respondents to answer. This research was conducted by distributing questionnaires to customers PT PLN (Persero) UP3 Palu ULP Kamonji on Customer Service Unit Rates for households that have submitted complaints, which will be measured using a Likert scale. This study uses descriptive analysis techniques and multiple linear regression analysis.

Population and Research Sample

According to Siyoto, et al (2018), a sample is part of the number and characteristics of the population, or a small part of the population taken according to a certain procedure so that it can represent the population. Sampling was done to facilitate research with a large number of population studied. Research cannot examine all populations for several reasons, such as limited funds, time and manpower. To determine the number of samples, this study uses the Slovin formula ($n = N / (1 + Ne^2)$). This study raises the degree of confidence to 90%, or an error rate of 10%, so that from a total population of 99 customers, the required sample size based on the Slovin formula is 99.35 or 100 respondents.

Research Instrument Scale

According to Sugiyono (2018: 93) the Likert scale is used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena. The questionnaire or questionnaire uses a Likert scale in the form of a checklist, so the measured variables are translated into variable indicators. Then these indicators are used as a starting point for compiling instrument items which can be in the form of statements or questions.

Data analysis method

Data analysis is one of the research activities in the form of the process of compiling and managing data in order to interpret the data that has been obtained, according to Sugiyono (2017) Data analysis is an activity after data from all respondents or other data sources has been collected. Data analysis activities are grouping data based on variables and types of respondents, tabulating data based on variables from all respondents, presenting data for each variable studied, performing calculations to answer the problem formulation and performing calculations to test the hypotheses that have been proposed.

Validity test

Validity test is done by comparing the value of r count with r table for degree of freedom ($df = n - 2$), in this case n is the number of samples. If r count is greater than r table and is positive, then the question is declared valid. (Sugiyono, 2017).

Reliability Test

Reliability test is a value that shows the consistency of a measuring device in measuring the same symptoms. To test the level reliability the instrument is carried out through the Internal Test Consistency by using the Reliability Coefficient (Cronbach's Alpha). The value of the Cronbach Alpha Coefficient is said to be good if the coefficient is between 0.6 and 1.0 (Umar, 2019).

Normality test

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According to Sugiono (2017), the best model is when the data is normally distributed or close to normal. If the data spreads around the diagonal line and follows the diagonal direction, then the regression model meets the normality assumption. Conversely, if the data spreads away from the diagonal line and/or does not follow the direction of the diagonal line, then the regression model does not meet the normality assumption.

Multicollinearity Test

To find whether or not multicollinearity exists in the regression model, it can be seen from the tolerance value and the variance inflation factor (VIF) value. The tolerance value measures the variability of the selected independent variables which cannot be explained by other independent variables. So a low tolerance value is the same as a high VIF value, because $VIF = 1/\text{tolerance}$, and indicates high collinearity. The cut off value used is for a tolerance value of 0.10 or a VIF value above 10.

Homoscedasticity Test

Homoscedasticity occurs when the probability distribution remains the same for all x observations, and the variance of each residual is the same for all values of the explanatory variable.

Multiple Linear Regression Analysis

Multiple linear regression analysis was carried out to find out the direction and how much influence the independent variables have on the dependent variable (Ghozali, 2018).

Coefficient of Determination (R²)

Testing the coefficient of determination was carried out with the intention of measuring the ability of the model to explain how the effect of the independent variables jointly (simultaneously) affects the dependent variable which can be indicated by the adjusted R-Squared value (Ghozali, 2016).

Simultaneous Significance Test (F Test)

The F test aims to find out whether the independent variables simultaneously (simultaneously) affect the dependent variable. The F test was carried out to see the effect of all the independent variables together on the dependent variable. The level used is 0.5 or 5%, if the significant value of $F < 0.05$ it means that the independent variables simultaneously affect the dependent variable or vice versa (Ghozali, 2016).

Variable Operational Definitions

1. Service Quality, the level of service related to customer expectations and needs. Indicators: Existence, Constraint, Responsiveness, Assurance, Empathy.
2. Customer Trust, consumer knowledge about an object, product and benefits. Indicators: Integrity, Kindness, Competence.
3. Promotion, efforts to notify or offer products or services with the aim of attracting potential consumers to buy or consume them. Indicators: Promotion Frequency, Promotion Quality, Quantity, Promotion Time.
4. Use of Applications, Knowledge in utilizing mobile application services. Indicators: Knowledge Characteristics, Benefits, Use.
5. Customer Satisfaction A person's feelings of pleasure or disappointment arising from comparing a product's perceived performance (or results) against their expectations. Indicators: Conformity of Expectations, Application Updates, Willingness to Recommend.

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RESEARCH RESULTS AND DISCUSSION

Research result

Validity Test Results

The results of testing the validity of the research instrument using the Statistical Product Service Solution (SPSS) for windows are summarized in table 3 below:

Table 3. Validity Test Results

Variable	Statement	Person Correlation	Sig	Alpha	Status
Service Quality (X1)	X1.1	0.816	0.000	0.05	Valid
	X1.2	0.838	0.000	0.05	Valid
	X1.3	0.774	0.000	0.05	Valid
	X1.4	0.833	0.000	0.05	Valid
	X1.5	0.832	0.000	0.05	Valid
	X1.6	0.850	0.000	0.05	Valid
	X1.7	0.880	0.000	0.05	Valid
	X1.8	0.819	0.000	0.05	Valid
	X1.9	0.883	0.000	0.05	Valid
	X1.10	0.861	0.000	0.05	Valid
Customer trust (X2)	X2.1	0.915	0.000	0.05	Valid
	X2.2	0.868	0.000	0.05	Valid
	X2.3	0.873	0.000	0.05	Valid
	X2.4	0.889	0.000	0.05	Valid
	X2.5	0.807	0.000	0.05	Valid
Promotion (X3)	X3.1	0.904	0.000	0.05	Valid
	X3.2	0.815	0.000	0.05	Valid
	X3.3	0.895	0.000	0.05	Valid
	X3.4	0.863	0.000	0.05	Valid
	X3.5	0.871	0.000	0.05	Valid
Application usage (X4)	X4.1	0.883	0.000	0.05	Valid
	X4.2	0.916	0.000	0.05	Valid
	X4.3	0.879	0.000	0.05	Valid
	X4.4	0.894	0.000	0.05	Valid
	X4.5	0.891	0.000	0.05	Valid
	X4.6	0.879	0.000	0.05	Valid
Customer Satisfaction (Y)	Y1	0.936	0.000	0.05	Valid
	Y2	0.835	0.000	0.05	Valid
	Y3	0.930	0.000	0.05	Valid
	Y4	0.919	0.000	0.05	Valid
	Y5	0.848	0.000	0.05	Valid

Source: Data Processing (2023)

Based on table 3 the results of the validity test of the questionnaire on 100 respondents are explained as follows:

124	ISSN 2576-5973 (online), Published by "Global Research Network LLC" under Volume: 6 Issue: 7 in Jul-2023 https://globalresearchnetwork.us/index.php/ajebm
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1. Service Quality Variable (X1) of the 10 statement items (X1.1 – X1.10) obtained the lowest correlation value on item X1.3 = 0.774 with a significance value = 0.000.
2. Work Motivation Variable (X2) of the 5 statement items (X2.1 – X2.5) obtained the lowest correlation value on item X2.5 = 0.807 with a significance value = 0.000.
3. Promotion Variable (X3) of the 5 statement items (X3.1 – X3.5) obtained the lowest correlation value on item X3.2 = 0.815 with a significance value = 0.000.
4. Application Usage Variable (X4) of the 6 statement items (X4.1 – X4.6) obtained the lowest correlation value on item X4.1 = 0.883 with a significance value = 0.000.
5. Customer Satisfaction Variable (Y) from 5 question items (Y1 – Y5) obtained the lowest correlation value on item Y2 = 0.835 with a significance value = 0.000.

Table 3 above shows that all statements are said to be valid because the probability value (sig) of all statements is less than 0.05 (alpha) and all the calculated r coefficient values (Pearson correlation) of all statements are greater than r table 0.195.

Reliability Test Results

The results of the instrument reliability test used in this study can be seen in table 4 below.

Table 4 Reliability Test Results

Variable	Cronbach' Alpha	Information
Service Quality (X1)	0.952	Reliable
Customer Trust (X2)	0.922	Reliable
Promotion (X3)	0.919	Reliable
Application Usage (X4)	0.947	Reliable
Customer Satisfaction (Y)	0.938	Reliable

Source: Data Processing (2023)

Based on the results of the reliability test in table 4. It is known that all instrument items have a Cronbach's Alpha value of more than 0.6. This means all items are reliable. Thus the entire statement (questionnaire) can be used for research.

Normality Test Results

Imam Ghozali (2011: 161) The regression model is said to be normally distributed if the plotted data (dots) that describe the actual data follow a diagonal line.

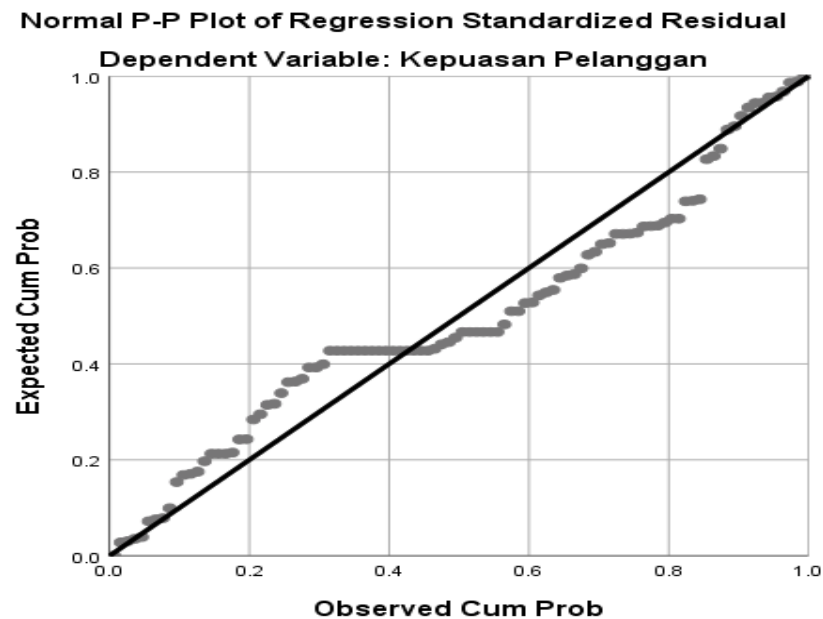


Figure 4. Graph of Normal PP Plot of Normality Test Results

Source: Data processed by SPSS 25 (2023)

The results show that the PP Normal graph of Regression Standardized Residual describes the distribution of data around the diagonal line and the distribution follows the direction of the diagonal line of the graph, so the regression model used in this study fulfills the Normality assumption.

Multicollinearity Test Results

Imam Ghozali (2011: 107-108) There are no symptoms of multicollinearity, if the tolerance value is > 0.100 and the VIF value is < 10.00 .

Table 5. Multicollinearity Test Results

Model	Collinearity Statistics	
	tolerance	VIF
(Constant)		
Quality of Service (X1)	.233	4,293
Customer Trust (X2)	.364	2,745
Promotion (X3)	.212	4,709
Application Usage (X4)	.208	4,811

a. Dependent Variable: Customer Satisfaction

Source: Data processed by SPSS 25 (2023)

Table 5 shows that there are no symptoms of multicollinearity if the VIF value < 10 . Because the VIF values of all variables are less than 10, there are no symptoms of multicollinearity at all. The independent variables. It can be concluded that there are no symptoms of multicollinearity in the model.

Simultaneous F-Test Results

The results of the simultaneous F-test analysis can be seen in table 6 below:

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Table 6. F Test Results

	Model	Sum of Squares	df	MeanSquare	F	Sig.
1	Regression	1316946	4	329,236	125,083	.000b
	residual	250,054	95	2,632		
	Total	1567,000	99			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Application Usage, Customer Trust, Service Quality, Promotions

Source: Data processed by SPSS 25 (2023)

Based on the test results in table 6 above, it can be seen that the Fcount value is 125,083 with the Ftable value being 2.31 so that the Fcount > Ftable or 125,083 > 2.31 and a significant level of 0.000 < 0.05, it can be concluded that the variable Quality of Service (X1), Customer Trust (X2), Promotion (X3) and Application Usage (X4) simultaneously have a significant effect on Customer Satisfaction at PT PLN (Persero) UP3 Palu ULP Kamonji, So the H5 hypothesis can be accepted.

t Test Results (Partial)

The (partial) t test was performed to test the significance of the regression coefficients of the independent variables, which can be seen in table 7 below:

Table 7. Test Results t

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	std. Error	Betas		
(Constant)	-.506	1047		-.484	.630
Service Quality	.112	.047	.202	2,384	.019
Customer trust	.231	.073	.215	3,170	.002
Promotion	.203	.087	.208	2,342	.021
Application Usage	.311	.076	.367	4,084	.000

a. Dependent Variable: Customer Satisfaction

Source: Data processed by SPSS 25 (2023)

1. In table 7 the significant value coefficients of Service Quality (X1) obtained a tcount value of 2.384 > ttable 1.66023, so it can be concluded that H1 is accepted which means there is an influence of Service Quality (X1) on Customer Satisfaction (Y) at PT PLN (Persero) UP3 Palu ULP Kamonji, So the H1 hypothesis can be accepted.
2. In table 7 the significant value coefficients of Customer Trust (X2) obtained a tcount value of 3.170 > ttable 1.66023, so it can be concluded that H2 is accepted which means there is an influence of Customer Trust (X2) on Customer Satisfaction (Y) at PT PLN (Persero) UP3 Palu ULP Kamonji, So the H2 hypothesis can be accepted.
3. In table 7 the coefficients of the significant value of Promotion (X3) obtained a tcount value of 2.342 > ttable 1.66023, so it can be concluded that H3 is accepted which means there is an influence of Promotion (X3) on Customer Satisfaction (Y) at PT PLN (Persero) UP3 Palu ULP Kamonji, So the H3 hypothesis can be accepted.
4. In table 7 the significant value coefficients of Application Use (X4) obtained a tcount value of 4.084 > ttable 1.66023, so it can be concluded that H4 is accepted which means there is an influence of

Application Use (X4) on Customer Satisfaction (Y) at PT PLN (Persero) UP3 Palu ULP Kamonji, So the H4 hypothesis can be accepted.

Correlation Coefficient (R) and Coefficient of Determination (R²)

The value of the correlation coefficient and the coefficient of determination in this research model can be seen in the model summary in table 8 below:

Table 8. Correlation Coefficient (R) and Determination Coefficient (R²) Summary of the model

Summary model ^b					
Model	R	R Square	Adjusted R Square	std. Error of the Estimate	Durbin-Watson
1	.917 ^a	.840	.834	1622	1870

a. Predictors: (Constant), Application Usage, Customer Trust, Quality Services, Promotions

b. Dependent Variable: Customer Satisfaction

Source: Data processed by SPSS 25 (2023)

In the model summary it can be seen that the correlation coefficient (R) produced in model 1 is 0.917. This shows the quality of service, customer trust, promotions, and application usage while having a strong relationship. The value of the coefficient of determination (R²) produced in model 1 is 0.840. This shows that the contribution of the independent variables, namely service quality (X1), customer trust (X2), promotion (X3), and application usage (X4) to the dependent variable (customer satisfaction) is 84% and the remaining 16% is influenced by other variables. which were not examined in this study.

Discussion

The Effect of Service Quality on Customer Satisfaction on PT PLN (Persero) UP3 Palu ULP Kamonji

Based on the results of hypothesis testing that has been done, it shows that the service quality variable has a positive and significant effect on customer satisfaction. It means PT PLN (Persero) UP3 Palu ULP Kamonji has made a good contribution to the quality of service in the PLN Mobile application. The results of this study are supported by Bramantya, Tumbuan and Djurwati (2023), Rahmatika and Madiawati (2020), and Aprianti, Maharani, Sutarna (2022) who found that service quality has a positive and significant effect on customer satisfaction.

The Effect of Customer Trust on Customer Satisfaction on PT PLN (Persero) UP3 Palu ULP Kamonji

Based on the results of hypothesis testing that has been done, it shows that the customer trust variable has a positive and significant effect on customer satisfaction. It means PT PLN (Persero) UP3 Palu ULP Kamonji has contributed to customer service officers, fast response and according to conditions in the field in fulfilling consumer complaints on the PLN Mobile application. The results of this study are supported by Nugraha (2021), and Sari, Lestarningsih (2021) who found that promotion has a positive and significant effect on customer satisfaction.

The Effect of Promotion on Customer Satisfaction on PT PLN (Persero) UP3 Palu ULP Kamonji

Based on the results of hypothesis testing that has been done, it shows that the promotion variable has a positive and significant effect on customer satisfaction. It means PT PLN (Persero) UP3 Palu ULP Kamonji has contributed to both promotional programs and promotions on social media that attract

consumers' attention to the PLN Mobile application. The results of this study are supported by Rahmatica and Madiawati (2020), and Hendayana, Sari (2020) who found that promotion has a positive and significant effect on customer satisfaction.

The Effect of Application Usage on Customer Satisfaction on PT PLN (Persero) UP3 Palu ULP Kamonji

Based on the results of hypothesis testing that has been done, it shows that the application usage variable has a positive and significant effect on customer satisfaction. It means PT PLN (Persero) UP3 Palu ULP Kamonji has contributed to the PLN Mobile service features which are quite complete and can meet the needs of service users in making transactions and it is also very easy to use the PLN Mobile application. The results of this study are supported by Rahmatica and Madiawati (2020) who found that application use had a positive and significant effect on customer satisfaction.

The Joint Influence of Service Quality, Customer Trust, Promotion and Use of Applications on Customer Satisfaction on PT PLN (Persero) UP3 Palu ULP Kamonji

Based on the results of hypothesis testing that has been done, it shows that the variables of service quality, customer trust, promotions and application usage together have a significant effect on customer satisfaction. It means PT PLN (Persero) UP3 Palu ULP Kamonji has made a good contribution in using the PLN Mobile application, useful according to customer needs with the addition of the latest PLN Mobile features. The results of this study are supported by Rahmatica and Madiawati (2020) who found that application use had a positive and significant effect on customer satisfaction.

CLOSING

Conclusion

1. Partially Service Quality has a positive and significant effect on Customer Satisfaction in PT PLN (Persero) UP3 Palu ULP Kamonji.
2. Partially Customer Trust has a positive and significant effect on Customer Satisfaction in PT PLN (Persero) UP3 Palu ULP Kamonji.
3. Partially Promotion has a positive and significant effect on Customer Satisfaction at PT PLN (Persero) UP3 Palu ULP Kamonji.
4. Partially, the use of the PLN Mobile application has a positive and significant effect on customer satisfaction PT PLN (Persero) UP3 Palu ULP Kamonji.
5. Quality of Service, Customer Trust, Promotion and Use of the PLN Mobile Application together have a significant effect on Customer Satisfaction PT PLN (Persero) UP3 Palu ULP Kamonji.

Suggestion

1. For PT. PLN (Persero) The company is expected to be able to maintain and improve its performance by always paying attention to the attributes that influence customer satisfaction in order to create compatibility between customer perceptions and expectations.
2. Customers are expected to be able to take advantage of the various facilities provided by the company in the PLN Mobile application, such as new power change installation services, complaints and disturbance reports, payment of electricity bills, purchase of electricity tokens and recording of stand meters independently.

129	ISSN 2576-5973 (online), Published by "Global Research Network LLC" under Volume: 6 Issue: 7 in Jul-2023 https://globalresearchnetwork.us/index.php/ajebm
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3. For future researchers, it is hoped that they can examine other variables outside of the variables that have been studied in this study in order to obtain varied results that can affect customer satisfaction, especially at PT PLN (Persero).

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