

The Effect of Using the PLN Mobile Application on PLN Customer Satisfaction (Case Study at PT PLN ULP Teluk Betung)

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ABSTRACT

This study aims to determine the effect of using the PLN Mobile Application on PLN Mobile Application User Satisfaction. This research is a type of quantitative research by processing primary data using a data collection method through questionnaires given to customers within the scope of PLN ULP Teluk Betung Bandar Lampung. The sample obtained was 100 respondents by taking samples using purposive sampling. The analytical tool in this research uses IBM SPSS Version 2. The analysis method used is multiple linear regression analysis. By using validity test, reality test, t test, and determination coefficient test. The analytical method used is multiple linear regression analysis. The result of this study is that the PLN Mobile application has a significant effect on customer satisfaction.

INTRODUCTION

Electricity is one of the basic needs that is used every day, every human being uses electricity for various needs ranging from lighting to industrial needs, communications, and other activities. PT PLN (Persero) as a State-Owned Enterprise (BUMN), is a provider of electric power for the public interest. The increase in electricity demand is characterized by several factors that greatly influence the increasingly advanced development of carrying out various studies to improve service quality by offering various service programs (Markoni, 2015). PT Services. PLN includes electricity installation services. Maintenance and provision of information, previously PT. PLN uses the website as a supporting service which is then upgraded to the PLN Mobile Application (Kaban et al. 2020). After using Internet-based services, it was launched again with a new application where the application can be used via smartphone and can be accessed wherever the customer is.

The use of information technology in the field of customer service at PLN mobile Bandar Lampung City is certainly a very important need and is not only used in supporting positions such as data processing and process automation, but is also considered strategic, also determining business strategy at PLN ULP Teluk Betung. It is easier for customers to get information from features, including:

- a) Check billing and token history
- b) Request for new installation/Power change/Temporary connection
- c) Check the status of complaints and requests (Home complaint service)
- d) Latest electricity tariff information.
- e) Latest news regarding PLN
- f) Electrical maintenance information
- g) Contact phones carry out activities that provide various information and communications 123 Voice Over internet protocol (VoIP).

Through the PLN Mobile application, customers feel helped because if there is a complaint, especially a disturbance, it will be more effective to use PLN Mobile because PLN Mobile must fulfill the SLA (Service Level Agreement) that has been determined by PLN, namely response time (the time starting from the report being received until officers arrive at the location of the disturbance) 30 minutes and recovery time (calculated time for handling disturbances) of 70 minutes has been recorded systematically in the PLN Mobile application. This gives customers certainty of time to resolve complaints, but this is still personal because every day there are still customers who report an electrical disturbance.

With the presence of a complaint application, of course there will definitely be errors or complaints that occur when customers submit complaints, therefore researchers want to evaluate the usability level of the PLN mobile application. The level of success of a company is one of the ways it can be seen from the level of satisfaction in the eyes of customers. Customers are an asset for the company, because the goal of all companies is customers. Not only how to make customers feel satisfied with what the company has provided and create loyal customers.

The following is data on the number of customers from PT PLN Persero ULP Teluk Betung who have used the PLN mobile application:

Table 1. PLN Mobile Application User Data

ULP	Jumlah Pelanggan per 30 Sept'23	Idpel Pengguna PLN Mobile 06 Nov'23	Target Nov'23	Pencapaian Thdp Target Nov'23	Target Des'23	Pencapaian Thdp Target Des'23	% Terhadap PLN Mobile thdp Plgn September'23
KARANG	131.393	42.936	33.622	128%	34.450	125%	32,68%
NATAR	129.784	65.590	46.955	140%	47.783	137%	50,54%
WAY HALIM	181.542	76.548	59.652	128%	60.481	127%	42,17%
KALIANDA	99.602	31.812	30.464	104%	31.292	102%	31,94%
SIDOMULYO	76.964	25.194	22.247	113%	23.075	109%	32,73%
SUTAMI	74.911	31.730	21.595	147%	22.424	142%	42,36%
TELUK BETUNG	128.589	32.632	30.655	106%	31.483	104%	25,38%
TANJUNG KARANG	822.785	306.442	245.189	125%	250.988	122%	37,24%
METRO	130.985	32.661	28.559	114%	29.388	111%	24,93%
SRIBHAWONO	164.330	30.455	25.081	121%	25.910	118%	18,53%
BANDAR JAYA	106.171	34.578	31.074	111%	31.902	108%	32,57%
TALANG PADANG	101.283	22.405	21.125	106%	21.954	102%	22,12%
KOTA AGUNG	76.640	16.018	15.206	105%	16.035	100%	20,90%
PRINGSEWU	168.323	30.249	27.003	112%	27.831	109%	17,97%
KALIREJO	102.058	21.242	18.169	117%	18.998	112%	20,81%
RUMBIA	96.237	29.337	20.128	146%	20.956	140%	30,48%
SUKADANA	155.935	27.903	25.621	109%	26.450	105%	17,89%
METRO	1.101.962	244.848	211.967	116%	219.422	112%	22,22%
BUMI ABUNG	170.270	34.495	28.034	123%	29.126	118%	20,26%
MENGGALA	178.623	41.474	35.843	116%	37.240	111%	23,22%
PULUNG KENCANA	87.744	18.743	14.985	125%	15.569	120%	21,36%
BUKIT KEMUNING	36.493	17.605	12.644	139%	13.137	134%	48,24%
BLAMBANGAN UMPU	91.361	17.309	14.968	116%	15.551	111%	18,95%
LIWA	118.755	24.635	21.070	117%	21.891	113%	20,74%
KOTABUMI	683.246	154.261	127.544	121%	132.514	116%	22,58%
UID LAMPUNG	2.607.993	705.551	584.700	121%	602.924	117%	27,05%

Source: PT PLN Persero ULP Teluk Betung

There are 32,632 PT PLN ULP Teluk Betung customers who have used the PLN Mobile Application. PT PLN Persero ULP Teluk Betung has regional coverage.

Table 2. Areas included in the coverage of PT PLN Persero ULP Teluk Betung

NO	NAMA KABUPATEN	NAMA KECAMATAN
1.	Tanggamus	-Cukuh Balak -Kelumbayan Barat -Kelumbayan
2.	Pesawaran	-Padang Cermin -Punduh Pidada -Marga Punduh -Teluk Pandan -Way Ratai
3.	Kota Bandar Lampung	-Panjang -Teluk Betung Selatan -Teluk Betung Utara -Teluk Betung Barat Teluk Betung Timur -Sukabumi

The PLN Mobile application is one part of the services released by PLN to its customers, so all eight of them can aim to make it easier for customers to carry out transactions, submit complaints and so on. So that PLN can always respond quickly wherever and whenever the time is so that customers don't

have to come to the office and all complaints and problems can be resolved, but this still becomes a problem because every day there are still customers who report it because of electricity problems at home.

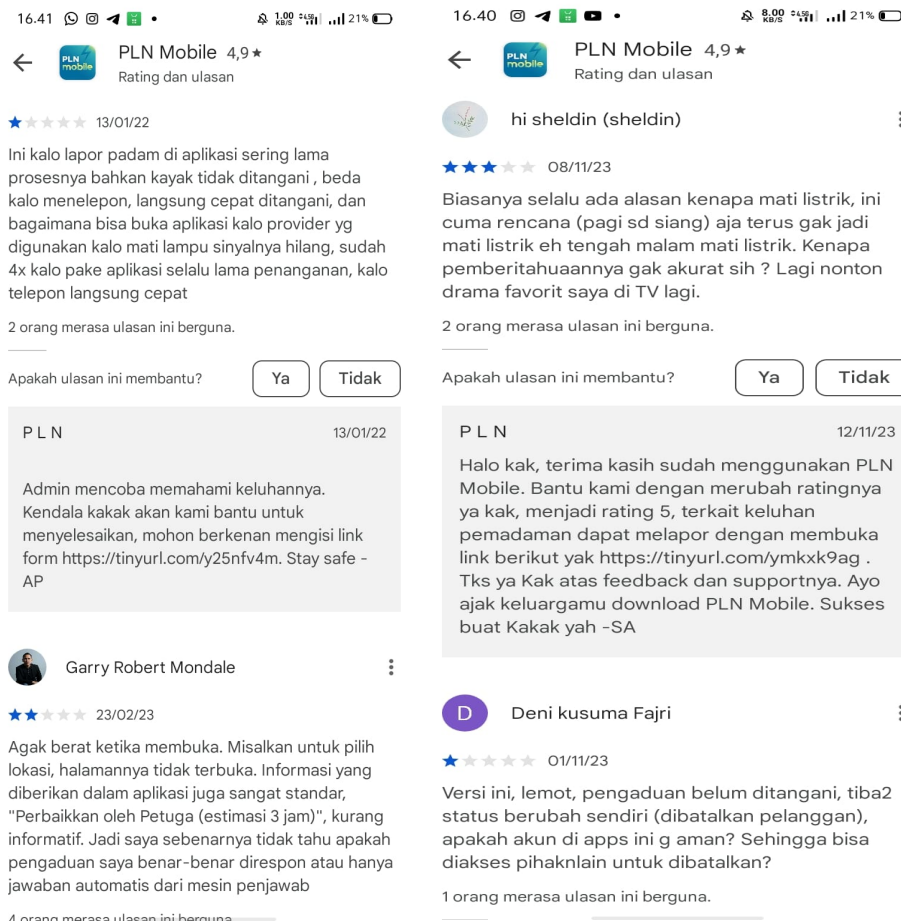


Figure 1. Several negative reviews of the PLN Mobile application on Playstore

Source: Personal documentation on Playstore

Customer satisfaction is a company benchmark for the company's eight directions. In fact, there are several things that need to be changed because there are customers who feel dissatisfied or disadvantaged. If customers are not satisfied, they will certainly not return again and may also complain about their dissatisfaction to other customers. Of course, this could be a threat to the company itself. Therefore, a company must be able to increase customer satisfaction and minimize customer dissatisfaction. Departing from the description above, the author has appointed it as an object in the scientific research due to the release in the Playstore on March 30 2021. There are still many comments or the implementation of this application requires improvement. This has been proven by the large number of comments from Playstore users, where out of 50,000 proposed user comments, many still have ratings of 1 to 3 of the problems identified. There have been a lot of complaints regarding the interface which is still confusing.

Problem Formulation

The formulation of the problem in this research is whether the use of the PLN Mobile Application has a positive impact on PLN customer satisfaction at PT PLN ULP Teluk Betung?

Research Purposes

The purpose of this research is to find out the impact of using the PLN Mobile Application and to know the satisfaction of PLN Mobile Application Users.

LITERATURE REVIEW

PLN Mobile Application

PLN Mobile is a PLN service application for customers (Mobile Customer Self Service) which has previously utilized Contact Center 123, Facebook, Twitter and PLN Web. Through the PLN Mobile application, customers can find out various information starting from bank transfer bills, Token transactions, usage history of cash receipts, payment locations through remote banking as well as information on the status/progress of applications and complaints.

In addition, the digital application also provides information to customers regarding the working status of PT PLN (Persero), (Chesanti & Setyorini 2018). The New PLN Mobile application as shown above is the first application released by PT PLN (Persero) which was launched on 31 October 2016, coinciding with Hari Listrik National 71st. Through corporate transformation, namely customer focus, PT PLN (Persero) re-launched the New PLN Mobile application with new features and cell displays shown in Figure 1 as a superior mobile application for providing good service to consumers, providing comfort & ease of use, etc. and different experiences compared to conventional methods (Tambunan & Hapsari 2021). According to Yanuarius, (2023) stated that the PLN Mobile Application has 7 indicators, including:

- a) Ease of use
- b) Responsibility
- c) Costs
- d) Security in making transactions
- e) Reliability
- f) Quality of service
- g) Achievement of customer expectations

Customer Satisfaction

Customer Satisfaction according to Kotler in Yuliana et al. (2019) is the level at which people compare the performance (results) they feel compared to their expectations. Therefore, the needs of service providers must be met so that they can achieve proper satisfaction. According to Irawan in Yuliana et al. According to Adji & Barusman (2023), customer satisfaction is a key indicator of business success. The greater the number of customers who will receive the product or service being offered, the greater the number of customers they are satisfied with, indicates that the strategy has been quite successful.

Customer Satisfaction includes 4 indicators, including:

- a) Price
- b) Service Quality
- c) Product Quality
- d) Emotional Factors

Conceptual Framework

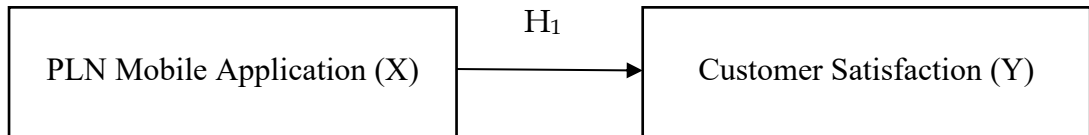


Figure 2. Research Conceptual Framework

Research Hypothesis:

H1: It is suspected that the use of the PLN Mobile Application has a positive effect on PLN customer satisfaction at PT PLN ULP Teluk Betung.

METHODOLOGY

The marketing strategy is an aggregate research using quantitative research which aims to explain the influence of the product variable, namely the PLN mobile application, on the product variable, namely customer satisfaction. This research has a special level compared to descriptive and comparative research because with scientific research a theory can be built that can function to explain, predict and control a symptom. Considering that the population number cannot be known for certain, the research will determine the number of respondents using the Lemelshow formula until a total of 96 respondents are reached which will be rounded up to 100 respondents.

Based on the population calculation of the Lelmelshow formula in Anilsa, (2020), namely:

$$n = \frac{z^2 p(1 - p)}{d^2}$$

$$n = \frac{1,96 \times 0,5(1 - 0,5)}{0,10^2} = 96,04$$

Information:

n = The size or number of samples required

Z = Z score at 95% or equivalent level (1,96)

p = Maximum estimate 0,5

d = Alpha (0.10) or sampling error used is 10%

In financial research, personal data collection is collected through personal research by the research team. The questions in the questionnaire use a Likert scale adapted in Anisa, (2020), with a range of 1-5. Accordingly, the data is analyzed using software (SPSS) velrsil 23. During the scientific process, the research instrument uses validity tests and reliability tests. The next step is to test classical assumptions, including normality tests and multicollinearity tests.

This is followed by hypothesis testing, which aims to find out the influence of the research variables on the data variables. The test of the scientific hypothesis includes the validity test, the reliability test, the multiple analysis of the results, the results of the analysis of the results, the t-test for testing the results in a partial way, the results of the analysis of the results used in research can be formulated as follows:

$$Y = a + bX + e$$

RESEARCH RESULT

Validity Test

According to Imam Ghozali (2016:45), the validity test is used to measure whether a qualification is valid or not. It is said to be valid if the value of $r_{count} > r_{table}$ 0.196

Table 3. Validity Test Result

PLN Mobile Aplication (X1)	r_{count}	r_{table}	Label
Point 1	0.839	0,196	Valid
Point 2	0,877	0,196	Valid
Point 3	0,861	0,196	Valid
Point 4	0,799	0,196	Valid
Point 5	0,884	0,196	Valid
Point 6	0,757	0,196	Valid

Customer Satisfaction (Y)	r_{count}	r_{table}	Label
Point 1	0.664	0,196	Valid
Point 2	0,786	0,196	Valid
Point 3	0,824	0,196	Valid
Point 4	0,898	0,196	Valid
Point 5	0,863	0,196	Valid
Point 6	0,869	0,196	Valid
Point 7	0,802	0,196	Valid
Point 8	0,810	0,196	Valid
Point 9	0,761	0,196	Valid

Sumber : Data diolah dengan SPSS 23

Based on table 3, all scientific statements show $r_{counts} > r_{tables}$ which show that the instruments used can calculate the values to be measured, so the data are considered valid.

Reliability Test

According to Ghozali (2016: 47), data reliability tests are used to evaluate the results of questionnaires that function as variable indicators. It is said to be reliable if the Cronbach Alpha value is > 0.60 .

Tabel 4. Reliability Test Result

Variable	Cronbach Alpha	Crisis Value	Label
PLN Mobile Application	0,912	0,60	Reliable
Customer Satisfaction	0,933	0,60	Reliable

Sumber : Data diolah dengan SPSS 23

Based on table 4, the PLN mobile application variable, customer satisfaction is all greater than Cronbach's Alpha above 0.60. For this reason, any instrument used in a measurement tool is considered to be reliable as a measuring instrument.

Multiple Linear Regression Test

Multiple linear regression is used to analyze several large influences between several variables.

Tabel 5. Multiple Linear Regression Test result

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.597	2.092		5.542	.000
	Aplikasi PLN Mobile	1.008	.088	.758	11.487	.000

a. Dependent Variable: Kepuasan Pelanggan

Sumber : Data diolah dengan SPSS 23

$$Y = 11.597 + 1,008X_1$$

Based on the table above, it can be seen that the constant value of 11,597 indicates that customer satisfaction for all PLN Mobile applications has not remained constant (constant).

The regression coefficient for the PLN Mobile Application is 1.008, indicating that the PLN Mobile Application has an influence on customer satisfaction. By increasing one PLN Mobile Application unit, customer satisfaction will also increase.

Coefficient of Determination Test (R²)

According to Ghazali (2016: 95), the delta model coefficient (R²) is used to measure the extent of the model's ability to eliminate model variations.

Tabel 6. Coefficient of Determination Test Result

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.758 ^a	.574	.569	3.019

a. Predictors: (Constant), Aplikasi PLN Mobile

Sumber : Data diolah dengan SPSS 23

In Table 6, the value of the product coefficient (R²) in the R Square column is $0.574 \times 100\% = 57.4\%$, which shows that the influence of the PLN Mobile application on customer satisfaction is 57.4%. And 52.6% of the results were influenced by factors that were not determined.

T-Test (Partial Test)

According to Ghozali (2016: 171), the partial test is used to measure the influence of each research variable on the data variable.

Tabel 7. T-Test (Partial Test)

Variable	Tcount	Ttable	Sig	Alpha
PLN Mobile Application	11,487	1,984	0,000	0,05

Sumber : Data diolah dengan SPSS 23

Based on table 7, it shows the results of the t test, which shows that the PLN Mobile application variable has the value of H_1 and it can be concluded that the PLN Mobile application has been accepted. influence contribute to customer satisfaction.

DISCUSSION

Based on the results of the multiple linear regression test, it is stated that the PLN Mobile application has an influence on customer satisfaction. And based on the results of the t test, which shows that the PLN mobile application variable has a total value ($11,487 > t_{table} (1,984)$) and a significance value ($0,000 < (0,05)$) which is different from H_1 in the results and it can be concluded that the PLN Mobile application has a significant influence on Customer satisfaction. Factors such as ease of use, informational sales, and features implemented in the PLN Mobile application have a strong influence in increasing customer satisfaction. The ease of access and information processing of bills, payments and other services via the PLN Mobile application helps speed up and streamline administrative processes for customers, which ultimately increases their level of satisfaction.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the above data processing, it can be concluded that the PLN Mobile application has had a significant impact on customer satisfaction. This shows that this application helps improve customer experience in telemarketing with PLN services.

ADVANCED RESEARCH

Based on the objectives and results of the study, several suggestions can be made which are expected to be useful for many parties, as follows:

1. Develop a plan to continue developing the PLN Mobile application by adding new features that can enrich the user experience. These could include digital billing information updates, information with customer service, or even custom intelligence features to provide more personalized communications to customers.
2. Ensure optimal PLN Mobile application sales for all customers by expanding the range of services and improving the supporting technological infrastructure. This technology includes ensuring stable

internet connectivity and good application speed across a variety of devices.

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