Influence *Perceived Usefulness, Perceived Ease of Use, Attitude* dan *Behavioral Intention* Terhadap *Customer Satisfaction:* Study on Application Users PLN Mobile in PT PLN (Persero) UP3 Rantauprapat

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Abstract.
This study aims to analyze the influenceperceived usefulness,perceived ease of use,attitude, Andbehavioral intentiontocustomer satisfactionon PLN Mobile application users at PT PLN (Persero) UP3 Rantauprapat. The study used a quantitative approach with a causal associative design. The research sample consisted of 390 respondents selected through a purposive sampling technique. Data collection was conducted using a questionnaire with a Likert scale, while data analysis used multiple linear regression with the help of SPSS version 24. The results showed that the four independent variables, namelyperceived usefulness,perceived ease of use,attitude, Andbehavioral intention, has a positive and significant effect oncustomer satisfaction, both partially and simultaneously. These findings indicate that perceived usefulness, ease of use, positive attitudes, and users' continued intention to utilize the PLN Mobile application can increase customer satisfaction levels. The implications of this study emphasize the importance of PT PLN (Persero) continuing to strengthen the application's quality by improving features, ease of navigation, and user experience to maintain customer satisfaction and loyalty in the era of digitalized public services.
Keywords: *Perceived Usefulness, Perceived Ease of Use, Attitude, Behavioral Intention, Customer Satisfaction and PLN Mobile.*

I. INTRODUCTION

Electrical energy plays a vital role in supporting economic activity, improving people's standards of living, and serving as a key driver of social transformation. Beyond a household necessity, the availability of electrical energy is also a key driver for industry, trade, transportation, healthcare, education, and government.[1]. According to the International Energy Agency's projections[2]Global electricity demand is expected to grow by around 3.4% annually through 2026, driven by the digitalization of public services and the increasingly widespread adoption of new technologies.

Indonesia's electricity demand continues to increase in line with population and economic growth, according to data from the Directorate General of Electricity.(DJK. ESDM, 2025)shows that the national electrification ratio has reached 99.83% in 2024, while per capita electricity consumption has jumped to 1,411 kWh, indicating increased economic activity, modernization, and integration of digital technology.[4]This presents both a challenge and an opportunity for PT PLN (Persero), as the primary electricity provider, to ensure a reliable, efficient, and inclusive supply for all Indonesians. The following data shows Indonesia's steadily increasing electricity consumption:

Fig.1. Electricity Consumption in Indonesia from 2019 to 2024. Source: DJK ESDM (2025)

Based on these data, the lowest increase in electricity consumption occurred in 2020, only reaching 99.20% of the target set by the government, which in 2029 was set by the government to reach 2,272 kWh/capita with economic growth of 8%.(DJK. ESDM, 2025).

To address these challenges, PLN has taken various strategic steps, including adopting a digital approach through the development of the PLN Mobile application. This app allows customers to access electricity services independently, from checking bills and making payments to reporting outages.[5]The launch of PLN Mobile on the 71st National Electricity Day demonstrates PLN's commitment to strengthening Customer Relationship Management (CRM) through the digitalization of public services.[6];[7].

Unfortunately, data shows that even though PLN Mobile has been downloaded more than 55 million times by the end of 2024, only around 23% of customers actually use this application for routine transactions.(web.pln.co.id). Most customers still rely on conventional service channels such as the 123 Call Center or visiting the Customer Service Unit (ULP) office in person. This finding confirms that the mere provision of digital technology does not automatically guarantee customer adoption and satisfaction.[9];[10]Tirtayasa also expressed a similar thing.[11], which states that digital transformation requires a responsive, user-centered approach. The following is the development of PLN Mobile users from 2020 to 2024:

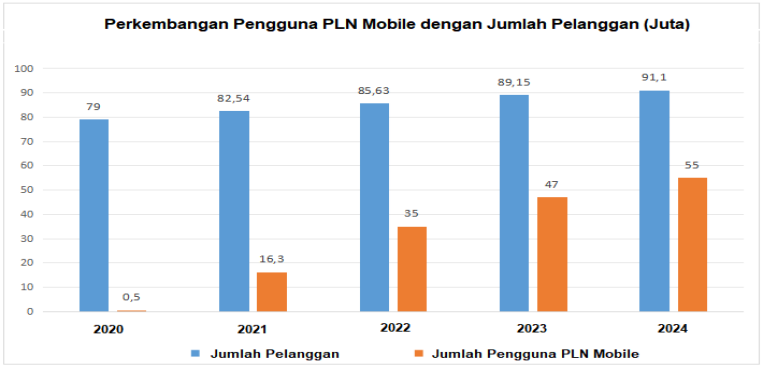

Fig.2. Development of PLN Mobile Users until 2024. Data source: web.pln.co.id

In the context of technology adoption, the Technology Acceptance Model (TAM) developed byDavis[12]This model explains that technology acceptance is influenced by user perceptions of perceived usefulness (PU) and perceived ease of use (PEOU). These two variables shape attitudes and behavioral intentions, which ultimately influence user satisfaction.[13];[14];[15]. StudySiregar & Putri [16]shows that the perception of usefulness and ease of digital applications significantly influences technology adoption by users.

As a region with rapid growth in electricity consumption, PLN UID North Sumatra has the highest number of customers outside Java, with 4,633,553 customers or around 4.99% of the total national customers.(PLN Statistics, 2024)The increasing population in North Sumatra contributes to an increase in the number of customers, so that PLN's market potential in this region also expands.[18]The more densely populated an area, the greater the needs and desires that must be met for survival.[19]. Based on statistical data from PLN UID North Sumatra, electricity demand continues to increase, as can be seen in the following table:

Table 1 Electricity Statistics Data for UID North Sumatra in 2024

NO	SEGMEN PELANGGAN	JUMLAH PELANGGAN	DAYA TERSAMBUNG (MVA)	ENERGI TERJUAL (GWH)
1	Rumah Tangga	4.342.092	4.421,96	6.555,63
2	Industri	5.356	1.485,04	3.282,86
3	Bisnis	163.244	1.271,42	1.982,48
4	Sosial	85.550	388,73	624,28
5	Gedung Kantor/ Pemerintah	11.680	125,24	167,44
6	Penerangan Jalan Umum	18.357	102,95	415,50
7	Lainnya (T,C,L)	7.274	72,73	206,06
TOTAL		**4.633.553**	**7.868,07**	**13.234,25**

Data source: PLN Statistics 2024

Table 1 shows that the household segment in PLN UID North Sumatra still dominates in terms of the number of customers and energy consumption, this reflects the dependence of the electricity sector on the community's electricity needs.

At PT PLN (Persero) UP3 Rantauprapat, which serves 509,931 active customers, this challenge is increasingly felt. Internal data shows that there were 39,007 disruption reports, only about 79.65% of customer disruption reports were submitted through the PLN Mobile application, while the rest still used conventional channels. This condition creates a gap between the perception of ease and the reality of the application's user experience, which has the potential to reduce customer satisfaction levels.[11];[16].

Further,Tirtayasa et al [11], emphasizing the importance of a digital strategy tailored to the local context, including a deep understanding of customer needs and characteristics. This aligns with PLN's responsibility as a public-satisfaction-oriented state-owned enterprise, where technological innovation must truly deliver tangible benefits to customers.Ait Lhassan et al [21].

Therefore, it is important to comprehensively analyze how the main factors of TAM affect Customer Satisfaction (CS) in the use of PLN Mobile at PT PLN (Persero) UP3 Rantauprapat. Based on this, this study was conducted with the title "The Effect of Perceived Usefulness, Perceived Ease of Use, Attitude, and Behavioral Intention on Customer Satisfaction: A Study on PLN Mobile Application Users at PT PLN (Persero) UP3 Rantauprapat". This study is expected to provide empirical contributions in the development of technology adoption models in the public service sector and become a basis for PLN in formulating a more inclusive, humanistic, and customer-oriented service digitalization strategy.

II. METHODS

Research Approaches and Types

This study uses a quantitative approach with a causal associative research type to examine the influence of perceived usefulness (PU), perceived ease of use (PEOU), attitude (ATT), and behavioral intention to use (BI) on customer satisfaction (CS) of PLN Mobile application users. This approach was chosen because it allows for empirical testing of relationships between variables through measurable data and statistical analysis, making it suitable for explaining causal relationships in the acceptance of digital technology. The causal associative design is used to not only identify relationships between variables but also measure the direction and magnitude of the influence of each construct in the research model. Santoso[22]states that this approach focuses on testing causal relationships based on empirical data that can be analyzed statistically, so it is relevant in research that assesses the influence between constructs simultaneously.

The theoretical basis of this research refers to the Technology Acceptance Model (TAM) developed by Davis[12], which explains that technology acceptance is determined by perceived usefulness and perceived ease of use. Venkatesh and Davis[13]emphasizes that these two constructs influence not only the initial decision to use technology but also its continued use. In the context of PLN Mobile, the success of the system is determined not only by the availability of features but also by user perceptions of the benefits and ease of access to digital services. The psychological aspects of users are explained through the attitude construct based on the Theory of Reasoned Action.Ajzen & Fishbein [23], which states that individual beliefs shape attitudes that influence behavior. A positive attitude toward PLN Mobile is thought to emerge when users perceive the usefulness and ease of use of the application. This attitude then shapes behavioral intention to use, namely the tendency to continue using the service, which ultimately leads to customer satisfaction as an evaluation of the match between the user's experience and expectations.[24];[6].

Previous research also shows that technology acceptance and the quality of user experience have a significant influence on satisfaction with digital services.[25];[26]Therefore, the TAM model is considered relevant in explaining the dynamics of acceptance and user satisfaction of PLN Mobile as a technology-based digital service.

Location, Population, and Research Sample

This research was conducted at PT PLN (Persero) UP3 Rantauprapat from December 2024 to May 2025. The location was selected based on the high level of PLN Mobile application usage in the area, thus being considered representative in describing customer experiences with PLN digital services. The diversity of customer characteristics and intensity of application usage are important considerations so that the data

obtained can represent variations in user perceptions of benefits, ease of use, attitudes, usage intentions, and customer satisfaction.

The initial population of the study consisted of all 358,868 customers of PT PLN (Persero) UP3 Rantauprapat who had downloaded the PLN Mobile application by December 2024. This number indicates a high level of initial adoption of the application, but does not fully reflect the actual user experience. Application downloads are not always followed by active use of service features, potentially resulting in measurement bias if all users were included in the study population. Therefore, the relevant population was filtered to include 21,154 customers who actively used PLN Mobile and had made at least one transaction in 2024 based on PLN's internal data. This filtering was carried out to ensure that the selected respondents truly had empirical experience in using PLN's digital services.

The sampling technique uses purposive sampling, namely a method of selecting respondents based on consideration of certain characteristics that are relevant to the research objectives.[27]. The use of this technique is considered more appropriate than probability sampling because TAM research emphasizes the importance of actual user experience with the technology being studied. Respondents were determined based on the following criteria: (1) using the PLN Mobile application in 2024; (2) having used key service features such as paying electricity bills, reporting outages, or power changes; and (3) having experience interacting with services through the application. Based on PLN's internal estimates, approximately 70% of active customers meet these criteria, resulting in a final population of 14,808 customers.

Determination of the number of samples was carried out using the Slovin formula with a margin of error of 5%.[28]The use of the Slovin formula is considered relevant because it allows for the determination of a minimum number of representative respondents without compromising the accuracy of the research results. The calculation results indicate a sample size of 390 respondents. This number is considered sufficient to support multiple linear regression analysis and to meet the needs of testing the relationships between variables in the TAM model.[27].

Operational Variables and Research Instruments

Operationalizing variables is an important step in quantitative research because it allows theoretical concepts to be translated into empirical indicators that can be measured systematically. Sugiyono[29]explains that an operational definition is a description of how a variable is measured, thus facilitating the development of research instruments and the data collection process. This study used four independent variables: perceived usefulness (PU), perceived ease of use (PEOU), attitude (ATT), and behavioral intention to use (BI), as well as one dependent variable: customer satisfaction (CS).

The relationships between variables are structured based on Davis's (1989) Technology Acceptance Model (TAM) framework. The perceived usefulness variable is used to measure the extent to which customers perceive PLN Mobile as providing tangible benefits in electricity service activities, such as bill payments, outage complaints, and independent service access. Meanwhile, perceived ease of use is used to measure the level of ease with which customers can understand features, navigate, and use the service without requiring significant effort.[13]. Perception of benefits and ease of use is thought to shape attitude, namely the customer's psychological evaluation of the use of the application.[23], which then encourages behavioral intention to use or the tendency to continue using the service.[30]. The series of user experiences culminates in customer satisfaction, namely the level of customer satisfaction based on the suitability of actual experience with service expectations.[24];[31].

Data collection was conducted using a closed-ended questionnaire instrument designed based on the operational indicators of each research variable. All statement items were measured using a five-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5). The use of the Likert scale was chosen because it is able to describe the intensity of respondents' perceptions and experiences in a hierarchical manner while also facilitating statistical data processing in research on technology user behavior.[27].

Data Collection and Analysis Techniques

This study uses primary and secondary data to obtain a more comprehensive empirical picture of PLN Mobile customer behavior. Primary data were obtained through the distribution of questionnaires to customers who met the research criteria, both offline and online. Direct distribution was carried out at the

Customer Service Unit (ULP) of PT PLN (Persero) UP3 Rantauprapat, while online distribution was intended to reach active customers who did not make direct visits to the service office. Secondary data were obtained through internal documents of PT PLN (Persero), electricity sector reports, scientific articles, reference books, and previous research to strengthen the conceptual basis of the study.

The characteristics of the research, which focuses on user experience, led to the selection of questionnaires as the primary instrument for data collection. Sugiyono[29]explains that a questionnaire is a data collection technique through a set of written questions to obtain information according to the empirical conditions of the respondents. Before testing the hypothesis, the research instrument was first tested for validity and reliability using the Statistical Package for the Social Sciences (SPSS) version 24. The validity test was conducted to ensure the ability of the statement items to represent the research construct, while the reliability test was conducted using the Cronbach's Alpha value to measure the consistency of the instrument.[32]Instrument testing is important because the accuracy of the interpretation of the relationship between variables is greatly influenced by the quality of the data produced.

Data that met the measurement quality criteria were then analyzed using multiple linear regression to determine the effect of perceived usefulness, perceived ease of use, attitude, and behavioral intention to use on customer satisfaction. Multiple linear regression was chosen because the study involved more than one independent variable, which was estimated to have a simultaneous or partial influence on the dependent variable. Prior to the regression analysis, the data was tested using classical assumptions including normality, multicollinearity, and heteroscedasticity tests to ensure the regression model met statistical requirements and was free from estimation bias. [33]. Fulfillment of classical assumptions is important because violation of statistical assumptions can lead to inaccurate interpretation of regression coefficients and reduce the validity of research inferences. The research regression model is formulated as follows:

$$Y = \alpha + \beta 1PU + \beta 2PEOU + \beta 3ATT + \beta 4BI + e$$

The results of the regression estimation are then interpreted through a t-test to determine the partial influence of each independent variable on customer satisfaction and an F-test to assess the simultaneous influence of all independent variables on the dependent variable.[32]. The level of the model's ability to explain changes in customer satisfaction is analyzed through the coefficient of determination (R^2), where the greater the coefficient value indicates the higher the ability of the construct in the TAM model to explain variations in customer satisfaction of PLN Mobile users.

III. RESULTS AND DISCUSSION

RESULT

This study uses multiple linear regression analysis to examine the influence of perceived usefulness, perceived ease of use, attitude, and behavioral intention on customer satisfaction of PLN Mobile application users. Multiple linear regression was chosen because it is able to estimate the linear relationship between more than one independent variable and the dependent variable simultaneously or partially.[32]This approach is also commonly used in Technology Acceptance Model (TAM)-based research to measure the contribution of each construct to outcome variables such as user satisfaction.

Before hypothesis testing, the regression model must meet the classical assumptions to ensure the parameter estimates are BLUE (Best Linear Unbiased Estimator). Therefore, normality, multicollinearity, and heteroscedasticity tests are performed to ensure the model is suitable for use in inferential analysis. These classical assumption tests are important because violating these assumptions can lead to bias in the interpretation of regression results.[32];[33]

Normality Test

The normality test aims to determine whether the residuals in a regression model are normally distributed. A good regression model requires a residual distribution that is close to normal to avoid bias in the estimation results. In this study, the normality test was conducted using the Normal Probability Plot method.

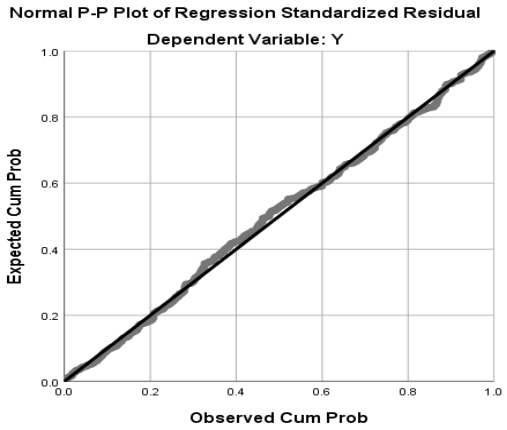

Fig. 3. Normality Test Results. Source: SPSS Data Processing Results (2025)

Based on the results in Figure 3, the data points are spread along the diagonal line, thus concluding that the residuals are normally distributed. This indicates that the normality assumption is met, making the regression model suitable for further testing.

Multicollinearity Test

Table 2 Multicollinearity Test Results

Coefficientsa			
Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	.775	1,290
	X2	.721	1,386
	X3	.711	1,407
	X4	.727	1,376
Dependent Variable: Y			

Source: SPSS Data Processing Results (2025)

The test results show that the tolerance value for all variables is greater than 0.10 and the VIF value is less than 10. This indicates that there are no symptoms of multicollinearity in the research model. Therefore, the independent variables can be used simultaneously without the problem of high correlation between them.

Heteroscedasticity Test

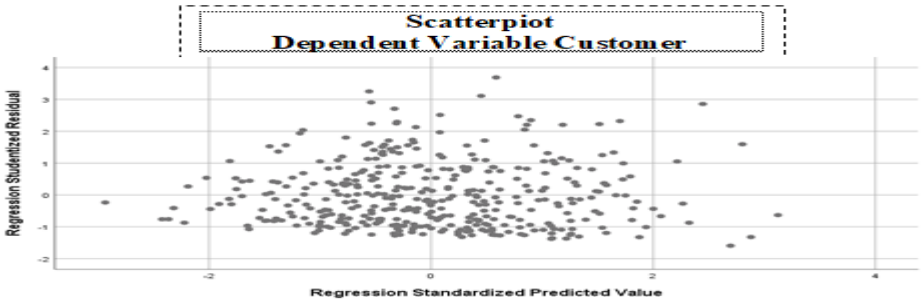

Fig. 4. Heteroscedasticity Test Results. Source: SPSS Data Processing Results (2025)

Based on the scatterplot results in Figure 2, the data points are randomly distributed and do not form a specific pattern. This indicates that there is no heteroscedasticity in the regression model, thus meeting classical assumptions and being suitable for further analysis.

Multiple Linear Regression Model

Table 3 Regression Test Results

Coefficientsa					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta		
(Constant)	2,660	.896		2,970	.003
Perceived usefulness(X1)	.192	.016	.293	12,138	.000
Perceived ease of use(X2)	.320	.023	.345	13,804	.000

	Attitude (X3)	.309	.024	.327	12,978	.000
	Behavioral Intention (X4)	.262	.025	.260	10,432	.000
a. Dependent Variable: Customer Satisfaction						

Source: SPSS Data Processing Results (2025)

The analysis results show that all independent variables have a positive influence on customer satisfaction. Perceived ease of use has the most dominant influence, followed by attitude, behavioral intention, and perceived usefulness. This indicates that ease of use is a major factor in increasing user satisfaction of the PLN Mobile application. Mathematically, the regression model can be expressed as follows:

$$\mathbf{Y = 2.660 + 0.192X1 + 0.320X2 + 0.309X3 + 0.262X4}$$

This equation shows that each increase in each independent variable will increase customer satisfaction, assuming the other variables are constant.

t-test (Partial)

Table 4 Results of the t-Statistic Test (Partial)

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,660	0.896		2,970	0.003
	X1	0.192	0.016	0.293	12,138	0,000
	X2	0.320	0.023	0.345	13,804	0,000
	X3	0.309	0.024	0.327	12,978	0,000
	X4	0.262	0.025	0.260	10,432	0,000
a. Dependent Variable: Customer Satisfaction Y						

Source: SPSS Data Processing Results (2025)

Based on these results, it can be concluded that perceived usefulness, perceived ease of use, attitude, and behavioral intention individually have a significant influence on customer satisfaction of PLN Mobile users.

F Test (Simultaneous)

Table 5 Results of F Statistical Test (Simultaneous)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10364,416	4	2591,104	457,305	.000b
	Residual	2181,420	385	5,666		
	Total	12545,836	389			
a. Dependent Variable: Y						
b. Predictors: (Constant), X4, X1, X2, X3						

Source: SPSS Data Processing Results (2022)

This shows that together, perceived usefulness, perceived ease of use, attitude, and behavioral intention have a significant influence on customer satisfaction.

Coefficient of Determination (R^2)

Table 6 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.909a	0.826	0.824	2,38034
a. Predictors: (Constant), X4, X1, X2, X3				
b. Dependent Variable*Customer Satisfaction*(Y)				

Source: SPSS Data Processing Results (2025)

The results show an R^2 value of 0.826, which means that 82.6% of the variation in customer satisfaction can be explained by the variables perceived usefulness, perceived ease of use, attitude, and behavioral intention, while the remainder is explained by other variables outside the research model.

IV. DISCUSSION

The Influence of Perceived Usefulness (PU) on Customer Satisfaction

Based on the results of research conducted on perceived usefulness in the context of customer satisfaction among PLN Mobile application users, the calculated t value was 12.138, while the t table for degrees of freedom (df) = 385 at a significance level of 5% was 1.967. Because the calculated t value (12.138) is greater than the t table (1.967), and the significance value is 0.000 <0.05, then H_0 is rejected and H_a is accepted. This shows that there is a significant influence between perceived usefulness and customer satisfaction among PLN Mobile application users at PT PLN (Persero) UP3 Rantauprapat.

Based on the distribution of respondents' answers to the level of perceived usefulness, the majority of respondents gave "Agree" and "Strongly Agree" answers to the statement "I feel helped because the PLN Mobile application makes all matters with PLN simpler." Specifically, 42.6% of respondents answered "Agree" and 48.7% answered "Strongly Agree". This shows that the majority of respondents feel the PLN Mobile application is very helpful in simplifying all matters with PLN.

However, some respondents also responded with "Disagree" and "Strongly Disagree" to some statements, although the numbers were relatively small. For example, regarding the statement "Using the PLN Mobile application makes the process of managing electricity needs more efficient," 6.1% of respondents felt the application was less useful. This indicates that not all users feel that the PLN Mobile application makes managing electricity needs more efficient.

Overall, the results of this study indicate that perceived usefulness significantly influences customer satisfaction among PLN Mobile app users, with the majority finding the app very useful. However, organizations or app developers need to consider and address negative perceptions or dissatisfaction from a small percentage of users, for example by improving features, enhancing performance, or providing clearer information regarding the app's usability.

This finding is in line with previous studies (Kusumawati et al., 2021; Wijaya et al., 2022; Prasetyo et al., 2023) which show a positive influence between perceived usefulness and customer satisfaction in users of technology-based applications.

The Influence of Perceived Ease of Use (PEOU) on Customer Satisfaction

Based on the results of research on the effect of perceived ease of use on customer satisfaction of PLN Mobile application users at PT PLN (Persero) UP3 Rantauprapat, the calculated t value was 13.804, while the t table at a significance level of 5% with degrees of freedom (df) of 385 was 1.967. Because the calculated t value (13.804) is greater than the t table (1.967) and the significance value is 0.000 <0.05, then H_0 is rejected and H_a is accepted. Thus, it can be concluded that there is a significant influence between perceived ease of use and customer satisfaction partially.

Based on the distribution of respondents' answers to the statements in perceived ease of use, the majority of respondents gave the answers "Agree" and "Strongly Agree" to the statement "Because the PLN Mobile application is easy to use, I want to continue using it for electricity service purposes.", 42.8% of respondents answered "Agree" and 35.4%% answered "Strongly Agree", which shows that respondents feel the PLN Mobile application is easy to use, I want to continue using it for electricity service purposes.

However, a small percentage of respondents still responded with "Disagree" and "Strongly Disagree," although the percentages were very small. For example, regarding the statement "The guide or menu in the PLN Mobile application helped me understand how to use it quickly," 4.4% of respondents answered "Disagree" and 1.5% answered "Strongly Disagree." This indicates that while most users find the presence of guides or menus in the application helpful, a small percentage may still find the information unclear, insufficiently structured, or inappropriate for their needs.

Therefore, application developers are advised to improve the quality of the user guide, such as by providing more interactive visual instructions, clarifying menu functions, and adjusting the interface to make it more intuitive for all users.

These findings align with previous research, such as that conducted by Fadilah et al. (2021), Ramadhan & Safitri (2022), Utami et al. (2023), Dewi & Nugroho (2024), and Pramono et al. (2025), which showed that perceived ease of use significantly influences customer satisfaction with a service. These studies confirm that the easier an application is to use, the greater the potential for increased customer satisfaction.

The Influence of Attitude (ATT) on Customer Satisfaction

Based on the results of research on the influence of attitude on customer satisfaction of PLN Mobile application users at PT PLN (Persero) UP3 Rantauprapat, the calculated t value was 12.978. Next, the t table value at a significance level of 5% with degrees of freedom (df) of 385 was 1.967. Because the calculated t value (12.978) is greater than the t table (1.967), and the significance value of 0.000 is less than 0.05, then H_0 (null hypothesis) is rejected and H_a (alternative hypothesis) is accepted.

Based on the explanation above, it can be concluded that partially there is a significant influence between attitude and customer satisfaction. The results of the distribution of respondents' answers to the statements in this variable show that the majority of respondents gave the answer "Strongly Agree" and "Agree" to the statement "Using the PLN Mobile application is the right decision for me", as many as 47.7% of respondents chose "Strongly Agree" and 78% chose "Agree". This shows that most respondents have a positive attitude towards the PLN Mobile application, feeling that using the application is the right decision.

However, for other statements, such as "Using the PLN Mobile application is enjoyable for me," a small percentage of respondents still responded with "Disagree" (3.1%) and "Strongly Disagree" (1%). While these percentages are relatively small, this indicates that some users may experience obstacles or inconveniences in using the application. These issues could be caused by various factors, such as difficulty navigating the application, features that don't match user needs, or technical issues.

Therefore, PLN management is advised to continue improving features and services that can foster positive user attitudes. Some steps that can be taken include simplifying the visual interface, improving application speed and stability, and providing responsive and informative customer service. These steps are expected to enhance user experience and minimize obstacles that some respondents may experience.

These findings align with previous research, such as that conducted by Rahmawati et al. (2020), Saputra and Lestari (2021), Wijaya et al. (2022), Nuraini and Zulfikar (2023), and Herlina et al. (2024), which showed that user attitudes toward technology use significantly influence their satisfaction levels. The more positive a user's attitude toward an application, the more likely they are to feel satisfied, actively use the service, and ultimately increase their loyalty to the service provider, in this case, PLN.

The Influence of Behavioral Intention (BI) on Customer Satisfaction

Based on the results of research on the influence of behavioral intention on customer satisfaction of PLN Mobile application users at PT PLN (Persero) UP3 Rantauprapat, the calculated t value was 10.432 and the t table value was 1.967 (df = 385, α = 5%). Because the calculated t value (10.432) is greater than the t table (1.967), and the significance value of 0.000 is less than 0.05, then H_0 is rejected and H_1 is accepted. Thus, it can be concluded that there is a partial significant influence between behavioral intention and customer satisfaction.

Based on the distribution of respondents' answers to the statements in this variable, the majority of respondents gave "Strongly Agree" and "Agree" answers to almost all statement items. For the statement "I would recommend others to use the PLN Mobile application because of its benefits," 25.6% of respondents answered "Strongly Agree" and 48.2% answered "Agree." This indicates that most users have a high intention to continue using the PLN Mobile application because they find the application useful and satisfying.

However, a small percentage of respondents chose "Disagree" and "Strongly Disagree," although the numbers were relatively low. Regarding the statement "I have a strong desire to continue using the PLN Mobile application as my primary means of accessing PLN services," 4.1% of respondents chose "Disagree"

and 1% chose "Strongly Disagree." This indicates that a small number of users still do not have a strong intention to use this application continuously.

Therefore, PLN is advised to continue improving the quality of the user experience to encourage more consistent usage intentions. Some steps that can be taken include adding more relevant features, improving app stability, and ensuring the app continues to provide clear benefits to its users.

This finding aligns with previous research, such as that conducted by Rahmawati et al. (2020), Fitriani and Sari (2021), Maulana et al. (2022), Lestari and Hidayat (2023), and Yusuf et al. (2024), which showed that behavioral intention has a positive and significant influence on customer satisfaction. Therefore, the stronger a user's intention to use the app, the higher their level of satisfaction with PLN Mobile services, which ultimately impacts user loyalty to the app.

V. CONCLUSION

The results of the study indicate that perceived usefulness (PU) significantly influences customer satisfaction among PLN Mobile app users at PT PLN (Persero) UP3 Rantauprapat. This indicates that the greater the benefits customers perceive from using the PLN Mobile app, the higher the level of customer satisfaction. *Perceived ease of use*(PEOU) has been shown to significantly impact customer satisfaction. This means that the ease of using the PLN Mobile application contributes to increased customer satisfaction with PLN's digital services. User attitude (ATT) toward the PLN Mobile app also significantly influences customer satisfaction. The more positive a customer's attitude toward using the app, the higher their satisfaction level. Behavioral Intention to Use (BI) significantly impacts customer satisfaction. This indicates that customers' intention to continue using the PLN Mobile app consistently correlates positively with perceived satisfaction.

Simultaneously, the variables perceived usefulness (PU), perceived ease of use (PEOU), attitude (ATT), and behavioral intention to use (BI) significantly influence customer satisfaction. This indicates that the four variables in the technology acceptance model (TAM) together are able to explain the level of customer satisfaction with the use of the PLN Mobile application at PT PLN (Persero) UP3 Rantauprapat.

VI. ACKNOWLEDGMENTS

The author would like to express his gratitude to God Almighty for His grace and blessings, enabling the completion of this article. He also thanks PT PLN (Persero) UP3 Rantauprapat and all respondents using the PLN Mobile application who assisted in the data collection process, as well as all parties who provided support and contributions during the preparation of this article.

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