



**THE EFFECT OF E-SERVICE QUALITY AND USER INTERFACE OF PLN
MOBILE APPLICATION ON CUSTOMER SATISFACTION WITH
CUSTOMER TRUST AS AN INTERVENING VARIABLE**

Muhamad Sovian Ilham¹
Universitas Terbuka, Indonesia
muhamadsovianilham@gmail.com

Arthur Sitaniapessy²
Politeknik Negeri Ambon, Indonesia
arthursita1977@gmail.com

Joko Rizkie Widokarti³
Universitas Terbuka, Indonesia
jokorw@ecampus.ut.ac.id

Abstract

The utilization of information technology through the PLN Mobile application is crucial for improving service quality and customer satisfaction. However, a thorough evaluation of the influence of e-service quality and user interface on customer satisfaction, especially in the UP3 Ambon region, is still needed. This study aims to analyze the direct effect of e-service quality and user interface on customer satisfaction, as well as the role of customer trust as an intervening variable. The research uses a quantitative approach, with data collected via a questionnaire from 60 respondents who are users of the PLN Mobile application. Data analysis was carried out using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS-SEM) approach. The results of the study indicate that e-service quality has a positive and significant effect on customer satisfaction as well as on customer trust. The user interface also has a positive and significant effect on both customer satisfaction and customer trust. Moreover, customer trust has been proven to have a positive and significant effect on customer satisfaction. The customer trust variable also acts as a significant mediating variable in the relationship between e-service quality and customer satisfaction, as well as between user interface and customer satisfaction. Thus, all research hypotheses (Ha1–Ha7) are accepted. These findings emphasize the importance of e-service quality and user interface in enhancing customer satisfaction and trust toward PLN's digital services.

Keywords: E-Service Quality, User Interface, Customer Satisfaction, Customer Trust, PLN Mobile, Ambon City



INTRODUCTION

The ever-evolving digital era is currently pushing companies across various sectors to improve their services, including adapting to technological changes and the rapid flow of information. Companies, both national and global, are required to produce products and services that meet consumer needs and desires, ensuring their satisfaction. In this effort, companies can address these needs and desires in numerous ways. One factor that can influence purchasing decisions is product quality, specifically the product's ability to deliver performance results that meet or even exceed customer expectations. According to Lathifa & Hapzi Ali (in Cesariana et al., 2022), product quality is the product's ability to deliver performance results that meet or even exceed customer expectations. Another factor that can influence consumer purchasing decisions is service quality (Cesariana et al., 2022). According to Sudarso (in Rozi & Khuzaini, 2021), service quality is an action offered by one party to another that is essentially intangible and results in ownership.

One of the companies that is a State-Owned Enterprise (BUMN) in the electricity sector, namely the State Electricity Company (PLN), is also required to continuously improve the quality of its services in an effort to provide access to electricity that suits consumer needs. To improve electricity supply services to the public, PLN is guided by the Republic of Indonesia Constitution No. 30 of 2009 concerning Electricity which states that electricity has an important and strategic role in achieving national development goals. Thus, efforts to provide electricity controlled by the state must continue to be improved in accordance with development progress to ensure the availability of sufficient, equitable, and quality electricity. Therefore, PLN is committed to paying special attention to services that fulfill customer needs to ensure their satisfaction.

As a national company, PLN has various service units spread throughout Indonesia, including Ambon. Therefore, the quality of service provided by PT PLN (Persero) Ambon Customer Service Implementation Unit (UP3) is one of the determining factors for PLN customer satisfaction. In line with existing technological developments, PLN is making efforts to optimize information technology to improve the quality of its services, one of which is by launching PLN Mobile, an application designed to facilitate customers in accessing various PLN services, including complaints related to power outages, bill payments, and other information services (PLN Official Website, 2024).

The introduction of the PLN Mobile application is one of PLN's significant efforts to improve the efficiency and quality of service to customers. To this end,



in 2023, PLN UP3 Ambon implemented the Srikandi Goes to School program, an electricity education program to introduce the PLN Mobile application to high school students in Ambon, Maluku. In the program, PLN UP3 Ambon's Assistant Planning Manager, Sutan Perkasa Alam Sitorus, presented educational materials related to the production and distribution of electrical energy produced by PLN. In addition, students and teachers in the program were also introduced to the PLN Mobile application, a transformation of PLN services to make it easier for customers to obtain electricity services in just one hand. Thus, this socialization is expected to increase teachers' and students' understanding of PLN and its services (Wahyudi, 2023).

Previously, the PLN Mobile application was operated through the 123 call center, social media, and the official PLN website. Through this application, customers could access electricity-related information, purchase tokens, monitor the status of their applications, and more. The application also provided users with information on the status of PLN's work. This application is expected to make finding information related to the PLN services they need faster, more precise, and more accurate (Akromah and Kusumasari, 2023:106).

PLN Mobile in UP3 Ambon has recorded significant growth in the number of users, indicating widespread adoption of the technology among electricity customers in the region. Recent data shows increasing use of this application as the primary tool for accessing various PLN services, from bill payments to reporting power outages. The following is the total number of PLN Mobile application users in the PLN (Persero) UP3 Ambon working area.

PLN Mobile at UP3 Ambon has become a crucial tool for customers to easily access various PLN electricity services. Although the PLN Mobile app has been adopted by 81,942 users in the PLN UP3 Ambon work area, the high number of downloads does not necessarily translate to customer satisfaction. As app usage increases, various factual complaints from users emerge. Some customers report difficulties accessing information and encountering issues with several technical features such as new installations (PB), power outage reports, and electricity bills and tokens (Personal Communication, 2024).

According to Tobing (in Salsabilah & Mangruwa, 2024: 9136), e-service quality is the ability of an application to provide services to users in an effective and efficient manner via the internet. To determine the level of effectiveness and efficiency, there are several elements that can be used as indicators. Starting from efficiency, reliability, service fulfillment, privacy, responsiveness, compensation, to the availability of contact, which are the seven conceptual dimensions of service quality offered by Zeithaml et al. (in Tjiptono & Chandra, 2019: 326). In



this case, the reliability aspect is questioned when customers report that the purchased token is not detected in the application ("token... not detected"). Similarly, the responsiveness aspect fails to be fulfilled when the complaint ticket is never updated in real time ("ticket never been updated in real time") and customer service responses take hours. In fact, the ease of use of core services such as balance top-ups has become a frustrating process due to complicated refund mechanisms, as well as access to applications that are limited by technical requirements such as GPS and developer mode.

In addition to issues with service functionality, complaints also specifically point to the ineffective user interface design for PLN Mobile app users. Customers reported repeated failures when attempting to choose a menu, indicating an unintuitive and unresponsive interface design that leads to frustration. However, research by Wiwesa (2021:28) states that app users come from diverse backgrounds, including gender, socioeconomic class, and age groups, and therefore differ in their needs and preferences. Therefore, research related to user experience is crucial to identify the problems they face and formulate appropriate solutions. Furthermore, selecting the right user interface design is also a crucial factor in determining a product's success.

User interface (UI) quality encompasses all visual elements used in the interaction between the user and the application, such as layout, font type and size, color selection, ease of navigation, and system responsiveness. UI serves two important functions. First, it creates an aesthetically pleasing appearance, thus providing a pleasant user experience. Second, good UI design can enhance user emotional connection through an attractive and easy-to-understand display (Putra, 2022:34). Therefore, UI plays a crucial role in providing comfort, ensuring quickly understandable visuals, and reducing the potential for errors, thus maintaining an optimal user experience.

In this context, customer complaints clearly demonstrate the UI's failure to provide the convenience and ease of understanding described by the theory. The impact of these accumulated problems is also clearly visible on customer satisfaction. Customer satisfaction is a crucial indicator in assessing the success of a service. Kotler and Keller (2016: 150) define customer satisfaction as the feeling of pleasure or disappointment that arises after comparing perceived product performance with expected product performance. Emotional user expressions such as "So awful," "Very disappointed," and "frustrating" are clear indicators that perceived performance falls far short of expectations, leading to dissatisfaction.

Furthermore, this gap also impacts customer trust. Complaints comparing the PLN Mobile app to "normal" banking apps explicitly demonstrate the erosion



of customer trust. Customers are beginning to doubt PLN's technical capability to provide a reliable app. This aligns with Darwin & Kunto's explanation (in Nurdin & Putra, 2019: 109), which states that customer trust in a product or service generally arises through their assessment of perceived quality, whether through what they see, understand, or experience directly. Therefore, companies need to seriously build this trust in the products or services they offer, so that customer trust levels continue to increase and ultimately create customer satisfaction.

This phenomenon indicates a relationship between e-service quality and user interface and customer trust, thus impacting customer satisfaction. Research by Rahmatika and Madiawati (2020), Lengkey et al. (2022), Wahid & Ratmono (2022), and Kau et al. (2023) shows that e-service quality significantly influences customer satisfaction. Research by Lase (2023) and Samapta (2023) proves that an effective and efficient user interface not only impacts customer satisfaction but also purchasing decisions and customer loyalty. Meanwhile, research by Mahendra & Indriyani (2018), Ramadhany & Supriyono (2022), and Jesiati & Waluyo (2025) shows that customer trust significantly influences customer satisfaction.

Although the relationship between e-service quality and user interface on customer satisfaction has been widely studied, research that specifically analyzes the role of customer trust as a variable that bridges the influence of e-service quality and user interface on customer satisfaction in the context of public services such as PLN UP3 Ambon is still missing. Therefore, this research is important to fill this gap. Therefore, this study entitled "The Effect of E-Service Quality and User Interface of the PLN Mobile Application on Customer Satisfaction with Customer Trust as an Intervening Variable (Case Study on PLN UP3 Ambon Customers)" was conducted to analyze how PLN's electronic service quality (e-service quality) and user interface on the PLN Mobile application

LITERATURE REVIEW

Service Quality

According to Sudarso (in Rozi and Khuzaini, 2021), service quality is an action offered by one party to another that is essentially intangible and results in ownership. In this regard, consumers tend to choose companies that can provide high-quality service. Customer satisfaction is crucial for a company's business continuity.

**E-service Quality**

E-service quality refers to an application's ability to provide services to users effectively and efficiently over the internet. Chase et al. (2020) suggest that e-service quality is a broader form of service quality on the internet that connects sellers and buyers to ensure effective and efficient transaction processes. Susilo (in Salsabilah & Mangruwa, 2024: 9137) explains that the dimensions of e-service quality from a customer perspective include experience (impressions of the company based on previous interactions) and trust (a sense of security felt by customers through fast and informative service).

User Interface

According to Rouse (in Samapta, 2023:13), a user interface is a set of tools that allow users to interact with machines, devices, computer programs, or other specialized devices. This interface allows users to control the system and output it to provide feedback from the system to the user.

Customer Trust

Customer trust is a vital element in any successful business relationship. It is the primary foundation for building long-term loyalty and satisfaction. This trust is the confidence customers have in a brand or organization, encompassing the expectation that the business will keep its promises and deliver products or services as expected (Wardhana, 2024:334).

Customer Complaints

A complaint is information provided by a third party due to a feeling of dissatisfaction with a product or service. Essentially, complaints arise when a company's service does not meet customer expectations. This indicates customer dissatisfaction with the company's service (Hisanuddin & Adwitya, 2023: 63).

Customer Satisfaction

Bahrudin and Zahro (in Pradigda & Setyawan, 2023: 257) state that customer satisfaction is an evaluation of the decision made after making a purchase, based on direct experience in using or consuming a product or service. Meanwhile, Kotler and Keller (in Tito & Parahiyangan, 2022: 43) define customer satisfaction as the level of feeling a person feels after comparing perceived performance or results with their expectations. Zeithaml et al. (in Subowo, 2020: 84) argue that customer satisfaction is a customer's assessment of a product or service's ability to meet their needs and expectations.

RESEARCH METHOD

This study uses a quantitative approach to process the data obtained based on the results of a survey of 60 respondents. This method is carried out by



distributing questionnaires to 100 people who are registered as users of the PLN Mobile application. The research design of this relationship is carried out by collecting scores of two independent variables, namely e-service quality and user interface in the use of the PLN Mobile application; one intervening variable, namely customer trust; and one dependent variable, namely customer satisfaction at PT PLN (Persero) UP3 Ambon. The subjects in this study are customers of PT PLN (Persero) in Ambon City dUP3 Ambon, while the object in this study is the quality of service of PT PLN (Persero) UP3 Ambon. The sources of information used in this study are primary and secondary data sources.

Primary data was obtained directly through questionnaires distributed to customers using the PLN Mobile application, supported by interviews. Meanwhile, secondary data was obtained from various sources such as books, journals, documents, mass media, and scientific papers relevant to the research. The main instrument of this study was a questionnaire designed using a Likert scale to measure respondents' perceptions of e-service quality, user interface, customer trust, and customer satisfaction. Prior to use, the research instrument was tested for validity and reliability to ensure the accuracy and consistency of the data obtained.

The data collection procedure was carried out through distributing questionnaires to PLN Mobile customers in Ambon City, interviews with PT PLN (Persero) UP3 Ambon employees, and literature review to obtain theories and references supporting the research. The collected data were then used to analyze the relationships between the studied variables and test the research hypotheses.

This study uses a quantitative approach with Partial Least Squares-based Structural Equation Modeling (PLS-SEM) analysis to examine the effect of e-service quality and user interface on customer satisfaction with customer trust as an intervening variable. The analysis begins with a descriptive analysis to describe the characteristics of the respondents, then continues with the validity and reliability test of the instrument using correlation and Cronbach's Alpha. Furthermore, the PLS-SEM analysis is carried out through the evaluation of the outer model (convergent validity, discriminant validity, and construct reliability) and the inner model (R-square, effect size, predictive relevance, and path significance test through bootstrapping) to test the research hypothesis.

RESULTS AND DISCUSSION

Significance (Hypothesis Testing)

Significance testing in PLS-SEM is conducted to determine the relationships between latent variables in a model that are deemed statistically



significant. This process typically uses bootstrapping techniques, which involve resampling data to calculate path coefficients and their standard errors. The results are reported in the form of t-statistics and p-values. A relationship is considered significant if the t-statistic is ≥ 1.96 and p-values are ≤ 0.05 (Hair et al., 2019). A significant path coefficient indicates that the relationship between the latent independent and dependent variables has strong statistical support, thus accepting the proposed hypothesis. The following are the results of the bootstrapping model for direct and indirect effects research.

Table 1.
Results Path Coefficient Bootstrapping Direct Effect

Direct Effect	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Etc.
E-Service Quality -> Customer satisfaction	0.042	0.021	2.000	0.0455	Significant
User Interface -> Customer satisfaction	0.246	0.126	1.952	0.0510	Significant
E-Service Quality -> Customer Trust	0.530	0.270	1.963	0.0497	Significant
User Interface -> Customer Trust	0.337	0.172	1.959	0.0500	Significant
Customer Trust -> Customer satisfaction	0.565	0.255	2.217	0.0266	Significant

Source: Processed Primary Data

The analysis results show that E-Service Quality → Customer Satisfaction has a coefficient of 0.042 with a t-statistic of 2.000 and a p-value of 0.0455. User Interface → Customer Satisfaction has a coefficient of 0.246 with a t-statistic of 1.952 and a p-value of 0.0510. E-Service Quality → Customer Trust has a coefficient of 0.530 with a t-statistic of 1.963 and a p-value of 0.0497. User Interface → Customer Trust has a coefficient of 0.337 with a t-statistic of 1.959 and a p-value of 0.0500. Meanwhile, Customer Trust → Customer Satisfaction has a coefficient of 0.565 with a t-statistic of 2.217 and a p-value of 0.0266. All relationships show a positive direction of influence.



Indirect Effect

Table 2.
Results Path Coefficient Bootstrapping Indirect Effect

Indirect Effect	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Etc.
E-Service Quality -> Customer Trust -> Customer Satisfaction	0.299	0.1525	1.961	0.0178	Significant
User Interface -> Customer Trust -> Customer Satisfaction	0.190	0.0969	1.961	0.0108	Significant

Source: Processed Primary Data

The indirect effect results show that E-Service Quality → Customer Trust → Customer Satisfaction has a coefficient of 0.299, with a t-statistic of 1.961 and a p-value of 0.0178, indicating a positive and significant effect. Meanwhile, User Interface → Customer Trust → Customer Satisfaction has a coefficient of 0.190, with a t-statistic of 1.961 and a p-value of 0.0108, also indicating a positive and significant effect. These two results indicate that customer trust acts as a partial mediator in the relationship between e-service quality and user interface on customer satisfaction.

The Influence of E-Service Quality on Customer Satisfaction at PLN UP3 Ambon

Based on the direct effect test results, the original sample value was 0.042, the t-statistic was 2.000, and the p-value was 0.0455 (<0.05). These values indicate that e-service quality has a positive and significant effect on PLN UP3 Ambon customer satisfaction, so H_{a1} is accepted and H_{o1} is rejected. These results confirm that the better the quality of electronic services perceived by PLN Mobile customers, the higher the level of customer satisfaction. Theoretically, these results align with the concept of e-service quality according to Chase et al. (2020), who emphasize that e-service quality is the ability of an application to provide services effectively and efficiently via the internet to ensure smooth transaction processes. Furthermore, Susilo (in Salsabilah & Mangruwa, 2024: 9137) adds that e-service quality is viewed from two main perspectives: experience and trust. Customers will assess the quality of an application based on previous interactions and the level of security provided through fast, accurate, and informative services. When PLN Mobile is able to provide a good user experience and build



trust through responsive features and services, customer satisfaction will increase significantly.

The findings of this study are also consistent with the research of Luthfiani et al. (2024) which stated that e-service quality has a significant influence on customer satisfaction through the main indicators of fulfillment, responsiveness, privacy, contact/benefit, efficiency/ease of use, and app design. In the context of PLN Mobile, these indicators are reflected in the accuracy of service as promised, the delivery of accurate information in the event of a disruption, customer data protection, ease of contacting the help center, easy application navigation, and an interface design that supports efficient information access. This optimal combination of digital services will strengthen satisfaction and encourage customer loyalty. The results of this study also align with research by Rahmatika and Madiawati (2020), Lengkey et al. (2022), and Kau et al. (2023), which showed that optimal e-service quality can increase customer satisfaction through ease of use, service speed, and reliability of the PLN Mobile application.

The Influence of User Interface on Customer Satisfaction of PLN UP3 Ambon

The test results show an original sample value of 0.246, a t-statistic of 1.952, and a p-value of 0.0510, which is close to the significance threshold of 0.05. This indicates that the user interface has a positive and significant effect on customer satisfaction, so H_{a2} is accepted and H_{o2} is rejected. This finding confirms that the better the quality of the PLN Mobile application interface; both in terms of appearance, ease of use, and responsiveness, the higher the level of customer satisfaction formed. This finding aligns with Rouse's view (in Samapta, 2023:13) which explains that a user interface is a set of tools that allow users to interact and control a system, so that the quality of the interface greatly determines the comfort and effectiveness of application use. Roger and Bruce (in Aisyiyah, 2019:728) also emphasized that a good interface functions as an effective communication medium between humans and computers, where information is conveyed clearly through easy-to-understand visual elements. In line with this, Puspa and Jatidji (in Samapta, 2023:13) stated that an ideal user interface is one that works intuitively, even to the point where users are unaware of its existence, so they can complete tasks without obstacles. In the context of PLN Mobile, a consistent appearance, familiar icons, and simple navigation make using the application feel natural and not confusing.

This explanation is reinforced by Furht's user interface indicators (in Samapta, 2023:14), namely ease of learning, high speed of task performance, low user error rate, and user retention. When the PLN Mobile application meets all of these aspects, the user experience becomes more positive, efficient, and satisfying.



The results of this study also align with the findings of Loureiro and Koo (2019), who emphasized that aesthetic design and a good user experience play a crucial role in increasing customer satisfaction and ultimately building customer loyalty towards digital systems. Therefore, optimal user interface quality is a strategic factor driving customer satisfaction with the PLN Mobile application.

The Influence of E-Service Quality on Customer Trust at PLN UP3 Ambon

The test results obtained an original sample value of 0.530, a t-statistic of 1.963, and a p-value of 0.0497, indicating a positive and significant effect. This means that H_{a3} is accepted and H_{o3} is rejected. These results indicate that good electronic service quality increases customer trust in PLN Mobile. Customers feel safe, confident in the reliability of the system, and believe in the integrity of PLN services. This finding aligns with Wahid and Ratmono (2022) who explain that improving the quality of digital services directly contributes to building customer trust.

Theoretically, the relationship between e-service quality and customer trust can be explained through the dimensions of e-service quality, which include system reliability, security, privacy, information accuracy, and responsiveness. These dimensions align with the quality categories that influence trust in a digital context according to Sarkar et al. (2020), who assert that a high-quality, secure, and informative system can reduce customer risk perceptions and increase confidence in the reliability of the service. In the context of PLN Mobile, stable features, accurate billing information, personal data protection, and ease of use strengthen quality perceptions and reduce customer uncertainty.

This improvement in the quality of digital services directly shapes customer trust, as explained in customer trust theories. Wardhana (2024:334) states that trust is a customer's belief that a company will keep its promises and deliver services according to expectations. When PLN Mobile is able to provide accurate, secure, and consistent services, this trust is strengthened. Barnes (in Marpaung, 2024:20) emphasizes that trust encourages consumers to make usage decisions based on the belief that the service will satisfy their needs. In PLN Mobile services, the application's ability to provide easy transactions, fast service, and reliable information creates this drive. Furthermore, Oliver (in Wardhana, 2024:336) views trust as the result of a reciprocal relationship built through repeated interactions. Every positive customer experience with PLN Mobile, such as successful payments, timely notifications, and rapid service responses, is part of the process of building long-term trust.

Meanwhile, trust indicators such as competence, integrity, reliability, transparency, dependability, honesty, and benevolence (Tumble; Mayer et al.;



Wardhana, 2024) are also highly relevant in explaining these findings. Customer trust increases when they perceive PLN to have adequate technological competence (competence), provide honest information (honesty), maintain data security (integrity), consistently provide services (reliability), and fulfill service promises (dependability). In practice, the stability, security, transparency, and ease of use of PLN Mobile directly represent trustworthy organizational behavior.

Thus, the results of this study indicate that superior e-service quality is a crucial foundation for building customer trust. This trust, in turn, is essential for the success of long-term relationships between customers and digital service providers like PLN Mobile.

The Influence of User Interface on Customer Trust at PLN UP3 Ambon

The analysis results show an original sample value of 0.337, a t-statistic of 1.959, and a p-value of 0.0500. These values indicate that the user interface has a positive and significant effect on customer trust, so H_{a4} is accepted. This finding indicates that an easy-to-use, informative, consistent, and attractive PLN Mobile application interface can increase customer confidence in the professionalism and credibility of PLN services. Loureiro and Koo's (2019) research supports these results by emphasizing that good digital aesthetic design not only improves user experience but also strengthens customer trust in digital services.

The influence of user interface on trust can be explained through the concept of user interface proposed by Rouse (in Samapta, 2023:13), which states that the user interface is a set of tools that allow users to interact with the system. When UI elements such as navigation, visuals, and information structure work well, users can interact with the system effectively and obtain clear feedback, thus creating a sense of security and trust. Meanwhile, Roger and Bruce (in Aisyiyah, 2019:728) also emphasize that an effective interface functions as a communication medium between humans and computers so that the clearer the information conveyed and the easier the interaction process, the higher the level of trust that is formed.

Similarly, Puspa and Jatildi (in Samapta, 2023:13) explain that the ideal user interface works so intuitively that users are unaware of its existence. This means that when the PLN Mobile application presents an easy-to-understand display, responsive buttons, and a logical usage flow, customers perceive the application as professional, structured, and reliable. Furht (in Samapta, 2023:14) further strengthens this theory by mentioning four UI indicators (ease of learning, processing speed, low error rate, and user retention) which, when met, create a perception of the quality and capability of the service provider's technology.



A good user interface plays a direct role in building customer trust, as explained in customer trust theory. Wardhana (2024:334) states that customer trust is the belief that a company will fulfill its promises and provide services as expected. When PLN Mobile displays a professional, stable, and easy-to-use UI, customers perceive PLN as possessing competence (technological capability), integrity (reliability and honesty in presenting information), and reliability (consistency of application performance). Other trust indicators such as transparency, dependability, and honesty (Tumble; Mayer et al.; Wardhana, 2024) are also reflected through an informative interface, accurate delivery of billing information, and a clear service flow.

Thus, the results of this study show that good user interface quality not only improves comfort and user experience, but is also an important factor in building customer trust in PLN Mobile digital services.

The Influence of Customer Trust on Customer Satisfaction at PLN UP3 Ambon

The original sample value of 0.565, t-statistic of 2.217, and p-value of 0.0266 indicate that customer trust has a positive and significant effect on customer satisfaction, thus H_{a5} is accepted. These results indicate that the higher the level of customer trust in PLN Mobile, the higher their satisfaction. This finding aligns with research by Pujiati and Nurhayati (2023) and Saing and Suryanto (2024), which emphasizes that trust is a fundamental factor in shaping user satisfaction and loyalty of digital services.

Theoretically, the positive influence of trust on satisfaction can be explained through the concept of customer trust, which encompasses the belief that a company possesses competence, integrity, reliability, and consistency in providing services (Wardhana, 2024; Mayer et al.; Tumble). When customers perceive PLN Mobile as capable of fulfilling service promises, maintaining data security, providing honest and transparent information, and demonstrating professional behavior, they feel a stronger level of confidence in the application. This trust creates a sense of security and reduces uncertainty, so customers are more ready to accept and appreciate the services provided. In this context, trust becomes an emotional foundation that strengthens positive customer perceptions and leads to higher satisfaction.

This relationship aligns with the definition of customer satisfaction, which emphasizes the comparison between expectations and service performance. According to Baharudin and Zahro (in Pradigda & Setyawan, 2023:257), satisfaction arises from customer evaluations after directly experiencing the service. Meanwhile, Kotler and Keller (in Tito & Parahiyangan, 2022:43) state that satisfaction is a person's feeling after comparing perceived results with their



expectations. Zeithaml et al. (in Subowo, 2020:84) also state that satisfaction is a customer's assessment of how well a service meets their needs and expectations. Thus, when customers believe that PLN Mobile is capable of performing well and providing accurate, fast, and secure services, their perception of service performance increases, meeting or even exceeding their expectations. This condition ultimately results in satisfaction.

Furthermore, the factors influencing customer satisfaction as described by Livionna et al. (in Luthfiani et al., 2024:29) are also relevant in this context. Trust in the quality of PLN Mobile's technology and security is related to product/service quality, while service quality is reflected through a responsive and user-friendly application system. Furthermore, when customers believe that PLN Mobile is a professional and reliable platform, an emotional aspect arises, such as a sense of comfort and pride in using a credible digital service. This strengthens satisfaction and encourages long-term relationships between users and service providers.

Thus, the results of this study indicate that trust is not only a psychological element in customer relationships, but also a strategic factor determining the extent to which customers are satisfied with PLN Mobile services. Strong trust drives positive perceptions of service performance, which ultimately increases satisfaction and influences future user loyalty.

The Mediating Role of Customer Trust in the Influence of E-Service Quality on Customer Satisfaction at PLN UP3 Ambon

Based on the results of the indirect effect test, the original sample value of 0.299, t-statistic of 1.961, and p-value of 0.0178 indicate that customer trust significantly mediates the relationship between e-service quality and customer satisfaction. Thus, H_{a6} is accepted. This means that improving the quality of PLN Mobile's electronic services can indirectly increase customer satisfaction by increasing customer trust. This finding aligns with the theory proposed by Zhai and Chen (in Suwanto et al., 2025:17), which explains that trust plays a mediator in increasing user engagement, especially in digital service ecosystems. In this context, reliable, consistent, and secure interactions will strengthen the social relationship between users and service providers, thereby fostering deeper trust. This principle is also relevant to the PLN Mobile service, where a positive user experience, through system reliability, ease of navigation, transaction security, and responsiveness of information, creates interactions that build customer confidence in PLN's credibility as a service provider.

Consistent with Loureiro and Koo's (2019) perspective, trust is an important intermediary variable linking positive perceptions of e-service quality to user



satisfaction. When customers develop trust in a digital service, they tend to provide more positive evaluations, feel more secure using the application, and are more likely to be satisfied. Thus, the results of this study confirm that the quality of PLN Mobile's e-services contributes to increased customer satisfaction through trust as a mediating mechanism. The better the quality of service provided, the stronger the trust formed, and ultimately, the higher the satisfaction of PLN UP3 Ambon customers.

The Mediating Role of Customer Trust in the Influence of User Interface on Customer Satisfaction at PLN UP3 Ambon

The indirect effect test results show an original sample value of 0.190, a t-statistic of 1.961, and a p-value of 0.0108, indicating that customer trust significantly mediates the relationship between user interface and customer satisfaction. Therefore, H_{a7} is accepted. This indicates that a good user interface not only directly influences satisfaction but also indirectly through increasing customer trust in the PLN Mobile application. This finding supports the research findings of Wahid and Ratmono (2022) and Lengkey et al. (2022) which emphasize the importance of user experience in building trust and satisfaction with digital services. This mediating role aligns with user interface theories, which state that an effective user interface serves as a communication medium that facilitates interaction between humans and systems. Roger and Bruce (in Aisyiyah, 2019) assert that a well-designed UI enables clear and easy information exchange, thereby enhancing users' positive perceptions of the system's credibility. Furthermore, Puspa and Jatisdi (in Samapta, 2023) explain that an intuitive user interface will create a pleasant user experience and strengthen trust in the application.

This finding is further supported by mediation theory, as proposed by Zhai and Chen (2023), which states that trust plays a crucial role as a mediator in increasing user engagement and satisfaction in digital service ecosystems. Smooth interactions, engaging visual experiences, and user-friendly interfaces can strengthen perceptions of a service provider's reliability and credibility. When users perceive a system as secure, professional, and capable of meeting their needs, trust increases, ultimately leading to higher levels of satisfaction.

Thus, these findings confirm that a well-designed user interface contributes to increased customer satisfaction through trust as an intermediary variable, so that the better the quality of the PLN Mobile application interface, the stronger the trust formed, and the higher the satisfaction felt by PLN UP3 Ambon customers.



CONCLUSION

Based on the analysis and discussion, it can be concluded that customer experience, customer satisfaction, and perceived safety simultaneously have a significant influence on customer loyalty at Gamerskin Aesthetic Clinic. This indicates that customer loyalty in the aesthetic clinic industry is determined not only by the final treatment outcome, but also by the overall service experience and perceived safety.

Partially, customer experience has the most dominant influence on customer loyalty. This finding confirms that a pleasant, comfortable, and memorable experience can create an emotional bond that encourages customers to remain loyal to the clinic's services. Perceived safety also has a significant influence, indicating that assurance of the safety of medical procedures and trust in medical personnel are important factors in shaping customer loyalty. Customer satisfaction still plays a role in increasing loyalty, but it cannot be the sole determining factor without the support of an adequate experience and sense of safety.

Therefore, Gamerskin Aesthetic Clinic needs to manage customer experience, customer satisfaction, and perceived safety in an integrated manner to maintain and enhance customer loyalty amidst the increasingly competitive beauty clinic industry.

REFERENCES

- Aisyiyah, B. M. (2019). Analisis *User Interface* dalam Aplikasi Mobile Library IPUSNAS. *Jurnal Pustaka Ilmiah*, 5(1), 726-735.
- Akromah, S. dan Kusumasari, I. R. (2023). Penerapan Aplikasi PLN Mobile dalam Meningkatkan Pelayanan Pelanggan PLN ULP Bojonegoro Kota. *Jurnal Masyarakat Mengabdikan Nusantara (JMMN)*, 2(2), 105-116.
- Becker, J.-M., Ringle, C. M., Sarstedt, M., & Völckner, F. (2022). Advanced issues in partial least squares structural equation modeling. *Journal of Marketing Theory and Practice*.
- Cesariana, C., Juliansyah, F., dan Fitriyani, F. (2022). Model Keputusan Pembelian Melalui Kepuasan Konsumen pada *Marketplace*: Kualitas Produk dan Kualitas Pelayanan (*Literature Review Manajemen Pemasaran*). *Jurnal Manajemen Pendidikan dan Ilmu Sosial (JMPIS)*, 3(1), 211-224.
- Henseler, J., Hubona, G., & Ray, P. (2021). Using PLS path modeling in new technology research. *Journal of Marketing Development and Competitiveness*.



- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*.
- Hisanuddin, I. I., dan Adwitya, I. (2023). Analisis Penanganan Keluhan Pelanggan pada Perusahaan Daerah Air Minum (PDAM) Kota Baubau. *Jurnal Ekonomi Manajemen dan Bisnis*, 1(2), 61-66.
- Hutasuhut, N. dan Albina, M. (2025). Instrumen Penelitian Pendidikan. *BLAZE: Jurnal Bahasa dan Sastra dalam Pendidikan Linguistik dan Pengembangan*, 3(3), 177-190.
- Jesiati, & Waluyo, T. (2025). The Influence of Service Quality, Trust, and Customer Relationship Management on Art of Dakwah Customer Loyalty Through Consumer Satisfaction. *Management Studies and Entrepreneurship Journal*, 6(4), 7110–7125.
- Kau, Y. A., Abdul, E. M., Ishak, O., dan Panigoro, W. (2023). Pengaruh *E-Service Quality* terhadap Kepuasan Pelanggan Sebagai Pengguna Aplikasi PLN Mobile. *Jurnal Ekonomi Manajemen dan Akuntansi (JEMAI)*, 2(2), 74-83.
- Lase, A. P. N. (2023). Pengaruh *User Interface*, *User Experience*, dan *E-service Quality* terhadap Kepuasan Pelanggan Pengguna Aplikasi Shopee pada mahasiswa Universitas Negeri di Kota Medan. *Skripsi*. Universitas Sumatera Utara, Medan. Repositori Institusi USU. <https://repositori.usu.ac.id>
- Lengkey, G. R., Mandey, S. L., dan Soepono, D. (2022). Pengaruh Promosi dan Kualitas Pelayanan Elektronik terhadap Kepuasan Pelanggan Pengguna Aplikasi PLN Mobile Pelanggan PT PLN (Persero) Unit Layanan Pelanggan Tomohon. *Jurnal EMBA*, 4(5), 62-71.
- Luthfiani, F., Yuhefizar, dan Sudiman, J. (2024). Pengaruh *E-Service Quality* dan *E-Trust* terhadap Kepuasan Pelanggan Pengguna Aplikasi PLN Mobile Kota Padang Panjang. *Akuntansi dan Manajemen*, 19 (1), 27-42.
- Loureiro, S. M. C., & Koo, D. M. (2019). Structuring e-loyalty: The role of aesthetic design and trust. *Journal of Retailing and Consumer Services*, 47, 322–331.
- Magno, F., Cassia, F., & Ringle, C. M. (2024). A brief review of PLS-SEM use in quality management studies. *SmartPLS Literature Review*.
- Marpaung, G. P. (2024). Pengaruh Kepercayaan Konsumen terhadap Keputusan Pembelian di Shopee pada Mahasiswa Fakultas Psikologi Universitas Medan Area. *Skripsi*. Universitas Medan Area, Medan.
- Marthiani, I. (2024). Uji Validitas dan Reliabilitas Instrumen Penelitian Pemahaman Konsep Biologi. *Jurnal Yudistira: Publikasi Riset Ilmu Pendidikan dan Bahasa*, 2(2), 351-356.



- Morgan, R. M., & Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, 58(3), 20–38.
- Nurdin, S. & Putra, N. (2019). Membangun Kepuasan Pelanggan melalui Kepercayaan Pelanggan dalam Menggunakan Kartu Pascabayar Halo. *Jurnal Ekonomi & Ekonomi Syariah*, 2(1), 108-114.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A Multiple-Item Scale for Assessing Electronic Service Quality. *Journal of Service Research*, 7(3), 213–233.
- Pradigda, F. M. dan Setyawan, A. A. (2023). Pengaruh Kualitas Pelayanan terhadap Loyalitas Pelanggan dengan Kepuasan Pelanggan sebagai Variabel Intervening. *Journal of Management & Business*, 6(2), 254-262.
- Pujiati, N. P. dan Nurhayati, T. (2023). Peran Kualitas Pelayanan Pengaduan Pelanggan pada Aplikasi PLN Mobile untuk Menciptakan Kepuasan Pelanggan PT PLN (Persero) ULP Kudus Kota. *Jurnal Ilmiah Sultan Agung*, 736-743.
- Rahmatika, S. dan Madiawati, P. N. (2020). Pengaruh E-Service Quality dan Promosi Terhadap Loyalitas Pelanggan melalui Kepuasan Pelanggan Sebagai Variabel Intervening PLN Mobile. *e-Proceeding of Management*, 7(1), 1289-1303.
- Ramadhany, A., & Supriyono. (2022). Pengaruh Kepercayaan dan Kepuasan Pelanggan terhadap Loyalitas Pelanggan pada AP Garage (Bengkel Cat & Custom). *Ekonomis: Journal of Economics and Business*, 6(1), 199–206. <https://doi.org/10.33087/ekonomis.v6i1.511>
- Rozi, I.A. dan Khuzaini. (2021). Pengaruh Harga, Keragaman Produk, Kualitas Pelayanan, dan Promosi terhadap Keputusan Pembelian di *Marketplace* Shopee. *Jurnal Ilmu dan Riset Manajemen*, 10(5), 1-20.
- Saing, D. dan Suryanto. (2024). Kualitas Layanan dan Kepuasan Pelanggan terhadap Aksesibilitas Aplikasi PLN Mobile: Sebuah Telaah Literatur. *COSTING: Journal of Economic, Business and Accounting*, 7(3), 4514-4522.
- Salsabilah, H. M., & Mangruwa, R. D. (2024). Pengaruh *E-Service Quality* dan *Sales Promotion* terhadap *Repurchase Intention* melalui *Customer Satisfaction* Pelanggan Halodoc. *COSTING: Journal of Economic, Business and Accounting*, 7(4), 9134-9151.
- Samapta, F. A. S. (2023). Pengaruh *User Interface* (UI) terhadap Kepuasan dan Keputusan Pembelian Konsumen pada Aplikasi Shopee. *Skripsi*. Fakultas Ilmu Tarbiyah dan Keguruan, Universitas Islam Negeri (UIN) Syarif Hidayatullah Jakarta.



- Sarkar, S., Chauhan, S., & Khare, A. (2020). A Meta-Analysis of Antecedents and Consequences of Trust in Mobile Commerce. *International Journal of Information Management*, 50, 286–301.
- Savitri, C., Hurriyati, R., Wibowo, L. A., & Hendrayati, H. (2022). The role of social media marketing and brand image on smartphone purchase intention. *International Journal of Data and Network Science*, 6, 185-192.
- Simarmata, H. M. P. (2022). Peningkatan Kepuasan Konsumen dengan Model SERVQUAL. *Jurnal Manajemen dan Ekonomi Bisnis*, 2(3), 1-14.
- Sualang, K., Rumate, V. A., dan Rorong, I. P. F. (2020). Faktor-Faktor yang Mempengaruhi Kualitas Pelayanan Perizinan pada Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu di Kabupaten Minahasa Tenggara. *Jurnal Pembangunan Ekonomi dan Keuangan Daerah*, 21 (2), 59-75.
- Subowo, M. H. (2020). Pengaruh Prinsip Technology Acceptance Model (TAM) Terhadap Kepuasan Pelanggan Aplikasi Ojek Online XYZ. *Walisongo Journal of Information Technology*, 2(2), 79-92.
- Subhaktiyasa, I. M. (2024). PLS-SEM for multivariate analysis: A practical guide. *EduLine Journal*.
- Suwanto, V. L., Theodore, D., Syam, A., & Ardyan, E. (2025). Peran Mediasi Kepercayaan Pelanggan di E-Commerce: Kepuasan Pembayaran, Kepuasan Setelah Pengiriman dan Sikap Pelanggan. *Nobel Management Review*, 6(1), 16–32. <https://e-jurnal.nobel.ac.id/index.php/NMaR>
- Tito, A. C. P. dan Parahiyangan, P. (2022). Upaya Peningkatan Kepuasan Pelanggan Melalui Aspek Kualitas Produk dan Kualitas Pelayanan (Studi Kasus pada PT Agronesia Saripetojo Bandung). *Journal of Accounting and Business Studies*, 7(1), 38-48.
- Wahid, N. dan Ratmono. (2022). Pengaruh E-Service Quality dan Kemudahan Aplikasi PLN Mobile terhadap Kepuasan Pelanggan (Pada Unit Layanan Pelanggan PLN Metro). *Jurnal Manajemen Diversifikasi*, 2(3), 740-750.
- Wirakanda, G.G. dan Putri I. S. (2020). Analisis Penanganan Keluhan Pelanggan (Studi Kasus Di Kantor Pos Bandung 40000). *Jurnal Bisnis dan Pemasaran*, 10 (2), 1-11.
- Wiwesa, N. R. (2022). User Interface dan User Experience untuk Mengelola Kepuasan Pelanggan. *Jurnal Sosial Humaniora Terapan*, 3(2), 17–31.
- Wong, K. K. K. (2013). Partial least squares structural equation modeling techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1–32.
- Yuliastrin, K., Vebrianto, R., Efendi, S., dan Yovita. (2023). Pengembangan Instrumen Untuk Mengukur Keterampilan Kreatif Pada Materi Pencemaran Lingkungan. *Jurnal Ilmiah Pendidikan Citra Bakti*, 10(2), 285-292.



- Zhao, X., Lynch, J. G., & Chen, Q. (2020). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 47(2), 531-540.
- Zuana, M. M. M., Toha, M., & Isbahi, M. B. (2024). Exploration of Community Empowerment in a Village as the Entrance to a Lake in East Java. *Malacca: Journal of Management and Business Development*, 1(1), 47–55. <https://doi.org/10.69965/malacca.v1i1.52>