



The effect of customer experience on customer loyalty mediated by customer satisfaction and customer trust (Study on users of PLN mobile application at PLN UP3 Malang)

Mohammad Eryan Saputra*, Sumiati, Agung Yuniarinto

Faculty of Economics and Business, Universitas Brawijaya, Malang, Indonesia
Corresponding Author: eryan.saputra@gmail.com

Received: 1 April 2023

Accepted: 8 June 2023

DOI: <https://doi.org/10.55942/jeb1.v3i3.205>

ABSTRACT

Customer experience refers to the internal, subjective response to an interaction with a product or service. Customer loyalty demonstrates customers' deep commitment to resubscribe or make consistent and repeated use of a service or product in the future. Mobile applications can integrate elements of customer experience, customer satisfaction, and customer trust to foster customer loyalty. The Mobile Application Customer Experience (MACE) highlights factors that influence customer experience, particularly in mobile application usage, including ease of use, convenience, customization, timeliness, and enjoyment. In this study, customer experience and customer loyalty are the independent and dependent variables, respectively, with customer satisfaction and customer trust acting as mediating variables. Employing a quantitative approach with explanatory research methods, the study is located at PLN UP3 Malang, and focuses on PLN UP3 Malang customers who have used the PLN Mobile application, with a total of 130 respondents. The results revealed that the variables of customer experience, customer satisfaction, and customer trust have a positive and significant impact on customer loyalty, both directly and indirectly. The mediating variables, customer satisfaction and customer trust, have a positive and significant influence on customer loyalty, as confirmed by mediation tests conducted.

Keywords: Customer Experience, Customer Satisfaction, Customer Trust, Customer Loyalty, Mobile Application Customer Experience (MACE).

1. INTRODUCTION

The business world in the digital age is increasingly dynamic and competition is very fierce. To be able to stay afloat and compete creative and innovative ideas and breakthroughs are needed to see opportunities that can make companies survive and grow driven day.

Customer Experience is an internal subjective response to interactions with products or services (Gentile et al., 2007; Lemke et al., 2011; Rose et al., 2012). (Barari et al., 2020) argue that most research on offline and online retailing does not only focus on affective experience, but is carried out a more extensive analysis of other circumstances of experience. The literature on customer experience identifies the status of sensorial experience dimensions (Bleier et al., 2019; Japutra et al., 2021; Molinillo et al., 2020, 2022), interactivity and expediency as two important dimensions for capturing cognitive experiences (Roy et al., 2017).

Loyalty shows the commitment of customers who persist deeply to re-subscribe or make purchases repeatedly and consistently in the future, even though the price offered will be higher or other factors. Loyalty makes the tendency for users to reuse services from the same company again. Loyal users prefer stable long-term relationships (Puriwat & Tripopsakul, 2017).

Mobile applications can combine elements of experience, satisfaction and user trust in loyalty. Companies are increasingly moving into the digital realm by developing mobile applications as an interaction platform for customers (Vahdat et al., 2021). To date, many studies on mobile applications have mainly focused on topics related to application adoption, such as: intention to use the application (Deng et al., 2010; Natarajan et al., 2018; Verkijika, 2018; Wang et al., 2013) and loyalty to the application (Cyr et al., 2006; Lee & Wong, 2016). Customer experience mobile application users are the integration of the physical world and the digital world (Gao et al., 2021).

The PLN Mobile application service innovation comes into a PLN customer problem solution, because customers can get service only by going through their mobile phone or smartphone (Nadhif & Niswah, 2018). The PLN Mobile application was created with the aim of making it easy for customers to interact and get PLN services that are faster, easier and transparent. Since the New PLN Mobile relaunch on December 20, 2020, the number of PLN Mobile application downloaders has been inconsistent. Data for 2021, the number of New PLN Mobile downloaders has not stabilized, seen in data at the end of December 2022 there was a decrease in PLN Mobile application users, this happens because some customers who have downloaded this application uninstall the application because they feel this application has not met expectations and gained a good experience.

Research on the relationship of the customer experience to the loyalty customer was carried out by (Iqbal et al., 2015) results show that the customer experience has a significant effect on the loyalty customer. The results of this study are consistent with the results of research conducted by (Shankar et al., 2016; Venkat, 2007) which states that there is a significant effect between customer experience variables on customer customers. Different results were shown by research conducted (Senjaya et al., 2013), the results showed that the customer experience did not have a significant influence on the loyalty customer. The differences in the results of this study give rise to research gaps, which will be examined in this study.

Based on the fenomenas of the problem discussed with reference to some previous studies, then this research will discuss the "The Effect of Customer Experience on Customer Loyalty Mediated By Customer Satisfaction And Customer Trust (Study On Users of PLN Mobile Application Users at PLN UP3 Malang)".

2. LITERATURE REVIEW

Customer behavior is something that is important to study, in order to provide value development and also provide empirical results from existing references or literature. This research is also based on pre-existing theories with references from various sources. (Hoffman & Novak, 1997) in (Chaffey & Smith, 2013) explains the categorization of types of consumers that can be divided based on demographics, and characteristics of internet use based on gender and race. Consumer behavior can also be divided based on consumer profiles and customer experience (Doherty & Ellis-Chadwick, 2009). Basically customer categorization by creating consumer profiles can be divided into gender, occupation, geography, education, income, activity and race. However, this research will focus more on the use of the second stage, namely customer experience. These theories and references are used in this study to examine and analyze more deeply by using several variables including the variables Customer Experience, Customer Loyalty, Customer Satisfaction and Customer Trust.

1. Consumer Behavior

Consumer behavior can be explained as where consumers decide to take an action, namely the act of buying or using and utilizing

a product or service. Consumer behavior can also be interpreted as the process of making a decision to make a purchase of what is purchased, how the buying process occurs and when the purchase is made by someone and is carried out on an ongoing basis (Mowen & Minor, 2012).

Ajzen, (1991) presented the Theory of Planned Behavior which explains the causes of behavioral intentions and is developed by adding the variable Perceived behavior control (Wu & Chen, 2014). This variable is added to provide control over consumer behavior which is limited by deficiencies and resources in behaving which are determined by three main determinants, namely attitudes, subjective norms, and perceived behavioral control.

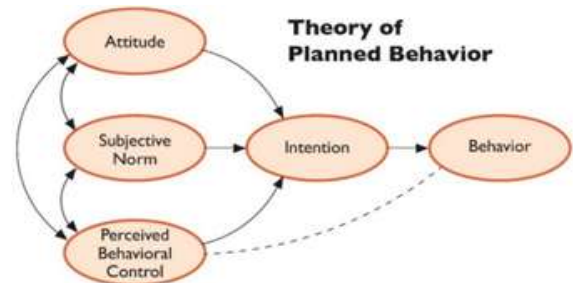


Figure 1. Concept of Theory of Planned Behavior (TPB)
Source: (Ajzen, 1991)

Theory of Planned Behavior (TPB) presented by (Ajzen, 1991) is a continuation of the previous theory, namely Theory Reasoned Action (TRA), where TRA explains the factors that influence human behavior and explains the relationship between beliefs, attitudes, subjective norms, intentions and individual behavior.

In 1989, Fred. D. Davis developed TRA into a new framework called the Technology Acceptance Model (TAM) with the aim of discussing acceptance of new technology among users, describing user acceptance behavior towards new technology, and analyzing the effect of new information technology on most users (Fred D. Davis, 1989)

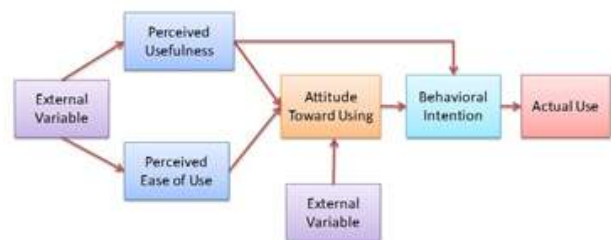


Figure 2. Theory of Technology Acceptance Model (TAM) concept
Source : (Fred D. Davis, 1989)

McLean et al., (2018) in his research entitled "Developing A Mobile Application Customer Experience (MACE) - Implication For Retailers" provides suggestions for several factors that can affect customer experience, especially in the use of a company's mobile application. The factors in question include ease of use, convenience, customization, timeliness and enjoyment. This research further refines the literature on consumer behavior research, especially the consumer behavior of mobile application users.

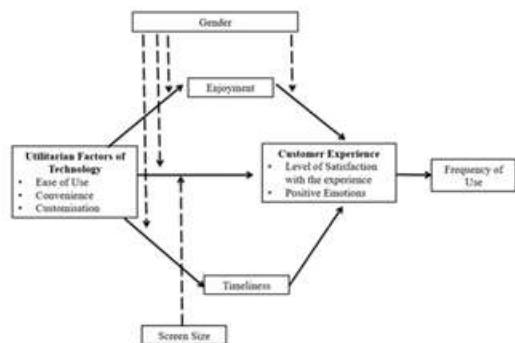


Figure 3. Theory concept of M-Commerce Mobile Application Customer Experience (MACE)
Source : (McLean et al., 2018)

The M-Commerce Mobile Application Customer Experience (MACE) Theory Model is a development of the Theory Technology Acceptance Model (TAM) outlining several important variables that can influence customer emotions in online retail (Rose et al., 2012).

2. Customer Experience

For a company it is very important to understand and study the customer experience and customer journey of its customers. Recent research and studies are increasingly expanding the definition of customer experience itself. Currently, customer experience is not only seen as an experience when interacting with employees of a company, for example, such as interacting with a customer service officer (CSO) or receptionist, but includes all aspects offered by a company such as advertising, products, packaging, how to use and reliability.

Customer experience is a response from the company. This allows the experience to be obtained to be different between consumers, even though the experience is obtained from the same product or service (Lemke et al., 2011; Shankar et al., 2016).

To get a good customer experience mobile application, then an application must have compatibility between product features and user needs, easy to find and easy to use the first time, then the product can make users feel happy when using it and the application can complete or do things -what the user wants. These are the four elements needed to get a good user experience (Guo, 2012).

3. Customer Satisfaction

Lovelock & Wirtz, (2021) states that customer satisfaction is a post-purchase customer emotional reaction which can be in the form of anger, dissatisfaction, irritation, neutrality, joy or pleasure. Customer satisfaction is the level of customer feelings after comparing perceived service performance compared to expectations (Kotler et al., 2016).

Seddon & Sant, (2007) argue that customer satisfaction taps into the needs, costs, and benefits of using information technology applications rather than perceived usefulness. Siau & Shen, (2003) also showed that satisfaction is a fundamental performance variable that influences customer perceptions of m-commerce.

Customer satisfaction is defined as to represent an important foundation for customer oriented business practices in many companies operating in various industries. Businesses that have

satisfied customers will highlight the potential value resulting from documented feelings towards customers (Szymanski & Henard, 2001).

4. Customer Trust

Mowen & Minor, (2012) explains that trust is realized when the desired product or service meets customer expectations. Customer trust will arise if the customer can feel satisfaction. Chen & Barnes, (2007) in his research explains that the level of trust in websites and online varies with respect to online transaction trust, including perceived usefulness, perceived security, perceived privacy, perceived good reputation, and willingness to conform. Mowen & Minor, (2012) in Kholis & Maharama, (2018), explains that trust is realized when the desired product or service meets customer expectations. (Kotler et al., 2016) said that, "Trust is the willingness of a firm to rely on a business partner. It depends on a number of interpersonal and interorganizational factors, such as the firm's perceived competence, integrity, honesty and benevolence."

5. Customer Loyalty

Customer Loyalty or customer loyalty is one source to build competitive advantage in the marketing of a company. According to Tjiptono, (2014) the existence of consumer satisfaction will be able to establish a harmonious relationship between producers and consumers. Creating a good basis for repeat purchases and creating customer loyalty and forming word of mouth recommendations that will benefit a company. Loyalty can also be seen from the amount of consumption and frequency of use by customers of a company's products. Zeithaml et al., (2018) explains that loyal consumers will usually do the following:

1. Recommend (by word of mouth) new customers for similar service relationship.
2. The probability of being pulled away by competitors is low.
3. Buying more products/services from the company from time to time.

Customer loyalty is a measure that can be relied upon to predict growth and can also be defined based on consistent buying behavior (Griffin & Yahya, 2005).

6. PLN Mobile application

The PLN mobile application is a super application created by PLN in order to respond to input, suggestions and results of research in the field that a media in the form of a mobile application is needed which has several advantages that come with more perfect features as PLN's superior digital platform to meet all customer needs, providing convenience and a different, more reliable, quality electrical service experience. The PLN Mobile application is a refinement of services and applications from previous PLN services such as Contact Center 123, Facebook, Twitter, and the PLN Web Portal (Nadhif & Niswah, 2018).

The PLN Mobile application is also a communication tool for PLN to interact with its customers. With PLN Mobile, PLN is now a digital-based company, including business processes, electricity services and marketing. In line with PLN's future growth based on innovation, PLN Mobile will continue to be developed and optimized, both related to service products and business processes (Kusuma & Rahim, 2021).

3. CONCEPTUAL FRAMEWORK AND HYPOTHESIS

1. Conceptual Framework

The mobile application user experience in the main components provides a conceptual framework for building and evaluating good mobile application user loyalty, in the context of a user-centric approach to the PLN Mobile application. These components become indicators of mobile user experience including functionality, context, user input, content and marketing (Cerejo, 2012). The framework in this study is a description of the relationship between the variables concerned in the research objectives, especially those studied in accordance with the formulation of the hypothesis and literature review as shown in Figure 4 below :

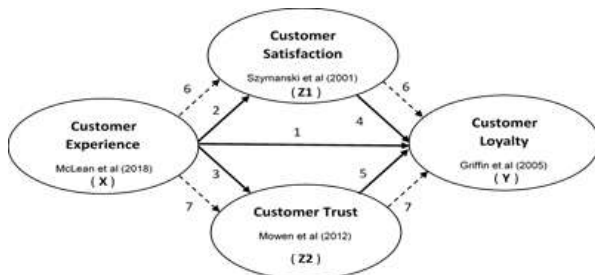


Figure 4. Research Conceptual Framework
Source: Processed by researchers (2023)

2. Research Hypothesis

2.1. The Influence of Customer Experience on Customer Loyalty

Customer experience is one of the key factors in the success of establishing customer loyalty. Several studies have shown that there is a positive relationship between customer experience and customer loyalty (Lin & Wang, 2006). Strengthened by the opinions of several previous researchers (Iqbal et al., 2015; Safricia, 2021; Sugysti & Ayuni, 2016) which suggests that customer experience will affect customer loyalty and have a significant impact. Venkat, (2007) dan Yosephine Simanjuntak & Purba, (2020) also conducted research which gave the same result that the experience factor had a significant positive influence on customer loyalty. Based on the explanation of some of the results of previous studies, Hypothesis 1 was obtained in this study, namely :

H1 : Increasing Customer Experience will be able to increase Customer Loyalty

2.2. The Influence of Customer Experience on Customer Satisfaction

Customer experience and customer satisfaction of mobile application users are felt to be different according to expectations and the reality of the services obtained. Research from (qbal et al., (2015); Oliver, (2010); Safricia, (2021); Sugysti & Ayuni, (2016); Venkat, (2007); Yosephine Simanjuntak & Purba, (2020) concluded that user satisfaction or dissatisfaction can be felt if the user has felt or used (user experience) of a product/service. Other opinions provide significant evidence that consumers feel satisfied when they experience positive disconfirmation, which occurs when the perceived performance exceeds previous performance expectations (Thakur, 2018).

Based on the explanation of some of the results of previous studies, Hypothesis 2 was obtained in this study, namely :

H2: Increasing Customer Experience will be able to increase Customer Satisfaction

2.3. The Influence of Customer Experience on Customer Trust

The better the customer experience felt by customers, the better their level of trust in the company, conversely the less satisfying the user experience felt by customers, the level of their trust in the company also decreased. Research McLean & Wilson, (2016); Molinillo et al., (2020); Widjieanto, (2020) explains that customer experience has a significant influence on customer trust. Based on the explanation of some of the results of previous studies, Hypothesis 3 was obtained in this study, namely :

H3 : Increasing Customer Experience will be able to increase Customer Trust

2.4. The Effect of Customer Satisfaction on Customer Loyalty

According to Deng et al., (2010) about understanding customer satisfaction and loyalty: An Empirical Study of mobile instant messaging in China suggests that the involvement of user experience with user satisfaction is based on how the user's perspective on functionality, trustworthiness. Several previous studies have directed customer satisfaction as the starting point for growing customer loyalty Tjiptono, (2014). According to Griffin & Yahya, 2005) in Lai et al., (2009) and in Hurriyati, (2010) states that "loyalty is defined as non-random purchases expressed over time by some decision making unit". Research Espejel et al., (2008) states that customer satisfaction has a significant positive effect on customer loyalty. Based on the explanation of some of the results of previous studies, Hypothesis 4 was obtained in this study, namely :

H4: Increasing Customer Satisfaction will be able to increase Customer Loyalty

2.5. The Influence of Customer Trust on Customer Loyalty

To maintain customer loyalty, not only satisfaction is needed, but more than that, customer trust is the key to relationship marketing (Chen & Barnes, 2007; Satryawati, 2018). The use of the customer trust media variable in this study is due to the influence of the trust and benefits felt by consumers on the interest in sustainable use (Guo, 2012).

Continuous use of the system indicates the existence of trust and satisfaction by consumers for the services provided D. Kim & Benbasat, (2003); D. J. Kim et al., (2008); G. Kim et al., (2009). The results of the study Wongso, (2020) also show that trust has a significant positive effect on customer loyalty. Based on the explanation of some of the results of previous studies, Hypothesis 5 was obtained in this study, namely :

H5 : Increased Customer Trust will be able to increase Customer Loyalty

2.6. The Influence of Customer Experience on Customer Loyalty Mediated by Customer Satisfaction

Loyalty will be obtained from customer trust if the customer can experience a good experience. The use of the mediation variable customer satisfaction, because of its association with feelings of satisfaction with the services provided. Satisfied users will build positive emotional relationships, loyal to use them (Ferrell & Hartline, 2011).

Research by Yosephine Simanjuntak & Purba, (2020) also state that customer satisfaction has a positive mediating effect on customer experience in order to create customer loyalty. Based on the explanation of some of the results of previous studies, Hypothesis 6 was obtained in this study, namely :

H6 : Increasing Customer Experience on Customer Loyalty Mediated by Customer Satisfaction

2.7. The Influence of Customer Experience on Customer Loyalty Mediated by Customer Trust

The use of the customer trust media variable in this study is due to the influence of the trust and benefits felt by consumers on the interest in sustainable use (Guo, 2012). Continuous use of the system indicates the existence of trust and satisfaction by consumers for the services provided D. J. Kim et al., (2008); G. Kim et al., (2009); D. Kim & Benbasat, (2003). Kholis & Maharama, (2018) research stated that in order to grow the loyalty of Go-Jek application users, the role of the customer trust variable is needed in mediating the effect of customer experience on customer loyalty. Customer Trust factors are often a mediating variable between customer experience and customer loyalty (Bibb & Kourdi, (2004); Heijden et al., (2003); Jati Ariwibowo & Nugroho, (2013); Siau & Shen, (2003). Based on the explanation of some of the results of previous studies, Hypothesis 7 was obtained in this study, namely :

H7 : Increasing Customer Experience on Customer Loyalty Mediated by Customer Trust

4. RESEARCH METHODOLOGY

This study uses a quantitative approach with explanatory research methods with research locations at PLN UP3 Malang and research subjects are PLN UP3 Malang customers who have used the PLN Mobile application.

The exact population size is not known, so the researchers used a non-probability sampling technique with a purposive sampling technique. The use of a purposive sampling technique is used because it is a sample selection technique with certain criteria that is adapted to the research objectives (Sekaran & Bougie, 2016; Sugiyono, 2013).

The number of samples needed in this study was 130 respondents, which was taken from the calculation of the results of the number of indicators as many as 13 indicators multiplied by 10 respondents per indicator, so the number of samples was 130 respondents. Sample selection is based on SEM requirements using the Maximum Likelihood Estimation (MLE)

model, which is 100-200 samples (Ghozali & Latan, 2015; Hair et al., 2010) or as many as 5-10 times the number of parameters estimated (Ferdinand, 2014).

Data analysis used to test the hypothesis in this study used Partial Least Square (PLS) where PLS is one of the variance-based Structural Equation Modeling (SEM) statistical methods designed to solve multiple regression when specific problems occur in the data, such as small study sample sizes, missing data (missing values) and multicollinearity (Jogiyanto & Abdillah, 2015).

5. RESULTS OF HYPOTHESIS TEST

1. Convergent Validity

Based on Convergent Validity (Outer Loadings) test, it is known that many of the research variable indicators each have an outer loading value of > 0.7 . These results indicate that there are no variable indicators whose outer loading values are below 0.5 so that all indicators are declared feasible or valid for research use and can be used for further analysis.

2. Discriminatory Validity

Based on Discriminatory Validity Test, it is known that each indicator on the research variable has the largest cross loading value on the variable it forms compared to the cross loading value on other variables and it can be stated that the indicators used in this study already have good discriminant validity in compiling their respective variables.

3. Path Coefficient Test

This test is used to show how strong the influence of the independent variable is on the dependent variable, and the R-Square value is used to measure how much the endogenous variable can affect other variables.

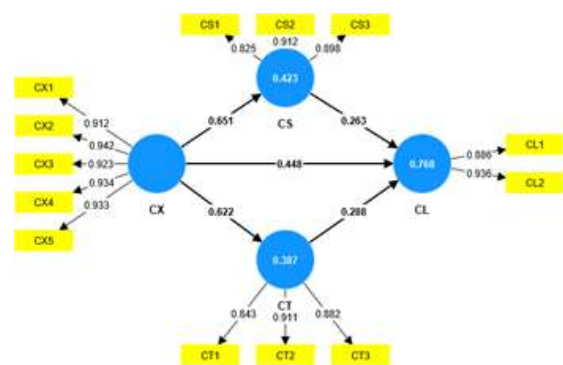


Figure 7. Measurement Model (Inner Model)
Source: Processed by the author (2023)

4. Reliability Test

From the Reliability Test it shows that the variables Customer Experience, Customer Trust, Customer Satisfaction and Customer Loyalty from the Average variance extracted (AVE) value have a value of more than 0.5, a Cronbach Alpha value of more than 0.6 and a composite reliability value of more than 0.7. Thus, no reliability/unidimensionality problems were found in the model formed, so this study has a high level of reliability.

Table 1. Reliability Test

Variables	Cronbach's alpha	Cut Off	Composite reliability (rho_a)	Cut Off	Composite reliability (rho_c)	Cut Off	Average variance extracted (AVE)	Cut Off	Note
Customer Experience	0.853	0.6	0.867	0.7	0.911	0.7	0.773	0.5	Reliable
Customer Trust	0.853	0.6	0.871	0.7	0.911	0.7	0.773	0.5	Reliable
Customer Experience	0.960	0.6	0.961	0.7	0.969	0.7	0.863	0.5	Reliable
Customer Loyalty	0.799	0.6	0.842	0.7	0.907	0.7	0.830	0.5	Reliable

Source: Processed by the author (2023)

5. Hypothesis Test

The direct influence test is used to answer the research hypothesis with criteria if the t-statistics value > t-table (1.96) or the p-value <0.05 then there is a significant effect. The results of the direct influence test can be seen in table 4, as follows:

Table 2. Path Coefficient Results (Direct Effect)

Relations between Variables	Original sample (O)	T statistics ((O/STDEV))	P values	Result
Customer Experience -> Customer Loyalty	0.448	3.149	0.002	Significant
Customer Experience -> Customer Satisfaction	0.651	9.031	0.000	Significant
Customer Experience -> Customer Trust	0.622	6.700	0.000	Significant
Customer Satisfaction -> Customer Loyalty	0.263	2.157	0.033	Significant
Customer Trust -> Customer Loyalty	0.288	2.628	0.010	Significant

Source: Processed by the author (2023)

1. Hypothesis 1 (There is an effect of Customer Experience on Customer Loyalty)

The t-statistics value of Customer Experience on Customer Loyalty is 3.149 > 1.96 or it can be seen from the p value which is 0.002 < 0.05. The original sample value is 0.448 which indicates that the direction of the relationship between Customer Experience and Customer Loyalty is positive. Thus H1 is accepted, namely Customer Experience has a significant effect on Customer Loyalty.

2. Hypothesis 2 (There is an influence between Customer Experience on Customer Satisfaction)

The t-statistics value of Customer Experience on Customer Satisfaction is 9.031 > 1.96 or it can be seen from the p value which is 0.000 <0.05. The original sample value is 0.651 which indicates that the direction of the relationship between Customer Experience and Customer Satisfaction is positive. Thus H2 is accepted, namely Customer Experience has a significant effect on Customer Satisfaction.

3. Hypothesis 3 (There is an influence between Customer Experience on Customer Trust)

The t-statistics value of Customer Experience on Customer Trust is 6.700 > 1.96 or it can be seen from the p value which is 0.000

<0.05. The original sample value is 0.622 which indicates that the direction of the relationship between Customer Experience and Customer Trust is positive.

Thus H3 is accepted, namely Customer Experience has a significant effect on Customer Trust.

4. Hypothesis 4 (There is an Influence of Customer Satisfaction on Customer Loyalty)

The t-statistics value of Customer Satisfaction to Customer Loyalty is 2.157 > 1.96 or it can be seen from the p value which is 0.033 < 0.05. The original sample value is 0.263 which indicates that the direction of the relationship between Customer Satisfaction and Customer Loyalty is positive.

Thus H4 is accepted, namely Customer Satisfaction has a significant effect on Customer Loyalty.

5. Hypothesis 5 (There is an influence between Customer Trust on Customer Loyalty)

The t-statistics value of Customer trust on Customer Loyalty is 2.628 > 1.96 or it can be seen from the p value which is 0.000 <0.005. The original sample value is 0.288 which indicates that the direction of the relationship between Customer Trust and Customer Loyalty is positive.

Thus H5 is accepted, namely Customer Trust has a significant effect on Customer Loyalty.

Table 3. Path Coefficient Results (Indirect Effect)

Relations between Variables	Original sample (O)	T statistics ((O/STDEV))	P values	Result
Customer Experience -> Customer Satisfaction -> Customer Loyalty	0.171	2.274	0.025	Significant
Customer Experience -> Customer Trust -> Customer Loyalty	0.179	2.746	0.007	Significant

Source: Processed by the author (2023)

6. Hypothesis 6 (Customer Satisfaction mediates the effect of Customer Experience on Customer Loyalty)

If seen from table 3, it shows that the effect of Customer Experience on Customer Loyalty mediated by Customer Satisfaction has a significant value. This can be seen from the t-statistics value of 2.274 > 1.96 and a p value of 0.025 <0.05. These results illustrate that there is a significant influence between Customer Experience on Customer Loyalty which is mediated by Customer Satisfaction.

Thus H6 is accepted, namely Customer Experience has a significant effect on Customer Loyalty which is mediated by Customer Satisfaction.

7. Hypothesis 7 (Customer Trust mediates the effect of Customer Experience on Customer Loyalty)

If seen from table 3 it shows that the influence of Customer Experience on Customer Loyalty mediated by Customer Trust has a significant value, this can be seen from the t-statistics value of 2.746 > 1.96 and a p value of 0.007 <0.05. This shows that there is a significant influence between Customer

Experience on Customer Loyalty which is mediated by Customer Trust.

Thus H7 is accepted, namely Customer Experience has an effect on Customer Loyalty which is mediated by Customer Trust.

6. DISCUSSION

Based on the results of the analysis above, a discussion will be carried out which provides some detailed information about the results of the research and the results of how each variable influences other variables. The independent variable in this study is Customer Experience while the dependent variable is Customer Loyalty with the mediating or intervening variable being Customer Satisfaction and Customer Trust.

1. Respondent Characteristics

The selection of profiles and characteristics of respondents was based on several criteria such as gender, age, education level, occupation, how long to use, how many times to use, and where to get information about the PLN Mobile application, as well as what features are frequently used. The screening questionnaire also asks about what features are frequently used, and the results of the distribution of the PLN Mobile application features that are frequently used.

2. Descriptive Statistical Analysis

a. Respondents' answers to the customer experience variable showed an average value of 4.76 for respondents' answers with an achievement of 80.71% in the criteria of strongly agreeing. The highest average value of the first respondent's answer is shown in the customization indicator with an average value of 4.78 with 83.08% of the respondents' answers to this indicator answering with the criteria of strongly agreeing. PLN Mobile users feel that the PLN Mobile application benefits from the features available as desired, open and developed according to user needs.

b. The average value of respondents' answers for the customer loyalty variable with referral and retention indicators is above 4.75 with an achievement of 78.08% in the criteria of strongly agree. This shows that PLN Mobile application users who are research respondents have loyalty to using the PLN Mobile application. The highest average value of the first respondent's answer is shown in the Retention indicator with an average value of 4.77 or 80.38% of the respondents' answers to this indicator answering with the criteria of strongly agree. This shows that PLN Mobile application users have experienced the benefits and uses and intend to continue using the PLN Mobile application as a solution in obtaining PLN services.

c. The average value of respondents' answers to the customer satisfaction variable is above 4.76 with achievements above 78.03% on the criteria of strongly agree. The figures obtained show that PLN Mobile application users who are respondents to this study have satisfaction in using the PLN Mobile application. The highest average value of the first respondent's answer is shown in the Affect indicator with an average value of 4.78 with 80.77% of the respondents' answers to this indicator answering with the criteria of strongly agreeing. This shows that PLN

Mobile application users get a positive impression of the services provided, application responses and PLN online to offline services.

d. The average value of customer trust by showing answers above is 4.74 with achievements above 77.24% in the criteria of strongly agree. This shows that users of the PLN Mobile application who are research respondents have confidence in using the PLN Mobile application. The highest average value of the first respondent's answer is shown in the ability indicator with an average value of 4.75 with 76.15% of the respondents' answers to this indicator answering with the criteria of strongly agree which means indicating that PLN Mobile application users feel the benefits and will continue to use PLN Mobile application.

3. The Effect of Customer Experience on Customer Loyalty

The results of this study also show that increasing customer loyalty of PLN UP3 Malang needs to be built by good customer experience variables with indicators of ease of use, convenience, customization, timeliness and enjoyment with the aim that these indicators will improve the image and acceleration of services that will provide benefits to PLN UP3 Malang in increasing revenue and accelerating cash in. Customers who use the PLN Mobile application can easily access, understand and use all the features in the PLN Mobile application.

The application can be easily found in the playstore for android and appstore for IOS. The menus available are very easy to understand their usefulness and provide convenience because they can be used anywhere and anytime so that users feel this application will continue to be used. This study reinforces the results of previous research, namely there is a positive relationship between customer experience and customer loyalty (Lin & Wang, 2006). It is also reinforced from the opinion (Japutra et al., 2021) that customer experience will affect customer loyalty and have a significant impact.

4. The Effect of Customer Experience on Customer Satisfaction

In this study concluded that the variable customer experience has a positive and significant effect on customer satisfaction. Thus Hypotheses 2 and 6 in this study are accepted, meaning that the higher the level of customer experience one has, the customer satisfaction will increase either directly or indirectly. Customer satisfaction of PLN Mobile users as a whole is a result of a process that emphasizes perceptual, evaluative and psychological processes, resulting from "the experience of using the PLN Mobile application". PLN Mobile users have experienced positive experiences when using this application both in terms of ease of access because the application is user friendly, convenient and saves time, with attractive and fun features, giving satisfaction to users as expected (Kotler et al., 2016). The results of this study reinforce several studies on the positive effect of customer experience on customer satisfaction, including significant evidence that consumers feel satisfied when they experience positive disconfirmation, which occurs when the perceived service exceeds previous performance expectations.

5. The Influence of Customer Experience on Customer Trust

This research concludes that the customer experience variable has a positive and significant effect on customer trust. Thus Hypotheses 3 and 7 in this study are accepted, meaning that the higher the level of customer experience one has, the level of customer trust will increase either directly or indirectly.

The customer experience that is felt from using the PLN Mobile PLN UP3 Malang application provides everything that is expected and needed in the usage cycle from before the interaction with the application to after the transaction occurs and may include interactions that go beyond services and guarantee security (privacy) of user data. Get a positive experience when using the application for various existing features, including the security of personal data such as customer ID, account bills, history of usage and purchases as well as users who can get cost transparency and service transparency. The results of this study indicate that the customer experience of users of the PLN Mobile application is in line with previous research, including research from (D. Kim & Benbasat, 2003; D. J. Kim et al., 2008) (G. Kim et al., 2009), which states that the customer experience variable has a positive and significant effect on the customer trust variable.

6. The Effect of Customer Satisfaction on Customer Loyalty

This research concludes that the variable customer satisfaction has a positive and significant effect on customer loyalty. Thus Hypotheses 4 and 6 in this study are accepted, meaning that the higher the level of customer satisfaction one has, the higher customer loyalty will be either directly or as a mediating variable. These results are an indication that to increase customer loyalty it is necessary to build good customer satisfaction variables with indicators of performance, affect and expectation with the aim that these indicators will increase customer satisfaction and customer loyalty.

The level of customer satisfaction of the PLN Mobile application at PLN UP3 Malang will tend to increase when the ability (performance) of the PLN Mobile application in meeting customer needs, demands and desires can increase relatively according to the costs that have been sacrificed by customers (Espejel et al., 2008). The performance that is the hope of PLN Mobile application users here is the performance of the PLN Mobile application itself and service performance from PLN. Reliable application capabilities, frequent errors, coupled with the ability to serve from staff both in the back office and officers in the field are factors driving customer satisfaction using the PLN Mobile application (Kusuma & Rahim, 2021).

7. The Influence of Customer Trust on Customer Loyalty

This study concludes that the variable customer trust has a positive and significant effect on customer loyalty. thus Hypotheses 5 and 7 in this study are accepted, meaning that the higher the level of customer trust, the higher customer loyalty will be, both directly and as a mediating variable. These results are an indication that to increase customer loyalty, it is necessary to build customer trust variables properly through the indicators of ability, benevolence and integrity.

This Ability indicator refers to the competence and characteristics of PLN through the PLN Mobile application in influencing and authorizing its customers. The utility of the PLN Mobile application includes competence, experience, and ability

ability in knowledge as outlined in the available features. Benevolence or kindness provided by the PLN Mobile application is PLN's willingness to provide mutually beneficial satisfaction between PLN and its customers. Profits can be maximized and customer satisfaction is also high by having great attention in realizing customer satisfaction. The PLN Mobile application presents a complete PLN service package solution in the hands of customers. To convince customers that PLN has responded, a menu is given to monitor the progress of its completion and several other rewards that are given by PLN to customers who use the PLN Mobile application as a form of integrity of the services provided (Chen & Barnes, 2007; Jati Ariwibowo & Nugroho, 2013; G. Kim et al., 2009; Rizky et al., 2022).

7. CONCLUSION

Based on the results of the study, the following conclusions can be drawn :

This study also concluded that the independent variable customer experience has a positive and significant effect on customer loyalty both directly and by using mediating variables customer satisfaction and customer trust. The higher the level of customer experience, customer satisfaction and customer trust felt by PLN Mobile application users, the more customer loyalty increases.

The results of this study also strengthen previous research on the influence of customer experience on customer loyalty both directly and mediated by customer satisfaction and customer trust and also prove that the theory of Mobile Application Customer Experience (MACE) as a development of the Theory of Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) where the indicators of customer experience developed previously became levers of PLN's customer acceptance rate towards the development of digital services through PLN Mobile application technology.

The next research can add the networking capability variable, the variable illustrates the role of the influence of external factors (business partners) of PLN to as a lever factor for customer loyalty of other PLN Mobile application users.

BIBLIOGRAPHY

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Barari, M., Ross, M., & Surachartkumtonkun, J. (2020). Negative and positive customer shopping experience in an online context. *Journal of Retailing and Consumer Services*, 53.
- Bibb, S., & Kourdi, J. (2004). Building customer trust. *Trust Matters*, 46(4), 87–105.

- Bleier, A., Harmeling, C. M., & Palmatier, R. W. (2019). Creating effective online customer experiences. *Journal of Marketing*, 83(2), 98–119.
- Cerejo, L. (2012, July 12). The Elements of The Mobile Experience. <https://www.smashingmagazine.com/>.
- Chaffey, D., & Smith, P. (2013). *Emarketing Excellence: Planning and Optimizing your Digital Marketing* (Google eBook). March 2017.
- Chen, Y., & Barnes, S. (2007). Initial trust and online buyer behaviour. *Industrial Management & Data Systems*, 107(1), 21–36.
- Cyr, D., Head, M., & Ivanov, A. (2006). Design aesthetics leading to m-loyalty in mobile commerce. *Information and Management*, 43(8), 950–963.
- Deng, Z., Lu, Y., Wei, K. K., & Zhang, J. (2010). Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *International Journal of Information Management*, 30(4), 289–300.
- Doherty, N., & Ellis-Chadwick, F. (2009). Exploring the drivers, scope and perceived success of e-commerce strategies in the UK retail sector. *European Journal of Marketing*, 43.
- Espejel, J., Fandos, C., & Flavián, C. (2008). Consumer satisfaction: A key factor of consumer loyalty and buying intention of a PDO food product. *British Food Journal*, 110(9), 865–881
- Ferdinand, A. (2014). *Metode Penelitian Manajemen: Pedoman Penelitian Untuk Penulisan Skripsi, Tesis Dan Disertasi Ilmu Manajemen*. Edisi kelima. In Badan Penerbit Universitas Diponegoro.
- Ferrell, O. C., & Hartline, M. D. (2011). *Marketing strategy: Vol. Fifth Edition* (B. W. C.-C. M. A. E. M. R. E. E. L. A. K. P. Vic e President of Editorial, Ed.; Fifth Edition). South-Western Cengage Learning. www.CengageBrain.com
- Fred D. Davis . (1989). Perceived Usefulness, Perceived Ease of Use, User Acceptance of Information Technology. *Management Information Systems Research Center, University of Minnesota*, 13, 319–340. <http://www.jstor.org/stable/249008>
- Gao, W., Fan, H., Li, W., & Wang, H. (2021). Crafting the customer experience in omnichannel contexts: The role of channel integration. *Journal of Business Research*, 126, 12–22.
- Gentile, C., Spiller, N., & Noci, G. (2007). How to Sustain the Customer Experience : An Overview of Experience Components that Co-create Value with the Customer. *European Management Journal*, 25(5), 395–410.
- Ghozali, I., & Latan, H. (2015). *Konsep, teknik, aplikasi menggunakan Smart PLS 3.0 untuk penelitian empiris*. BP Undip. Semarang, 290.
- Griffin, J., & Yahya, D. K. (2005). *Customer Loyalty: Menumbuhkan & Mempertahankan Kesetiaan Pelanggan* (Edisi Revisi dan Terbaru) / Jill Griffin.
- Guo, F. (2012). More Than Usability: The Four Elements of User Experience, Part I. <http://www.uxmatters.com/mt/archives/2%0A012/04/more-than-usability-the-four-elements-of-user-experience-part-i.php>
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate Data Analysis: A Global Perspective*.
- Heijden, H. Van Der, Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: Contributions from technology and trust perspectives. *European Journal of Information Systems*, 12(1), 41–48.
- Hoffman, D. L., & Novak, T. P. (1997). A new marketing paradigm for electronic commerce. *Information Society*, 13(1). Hurriyati, R. (2010). *Bauran pemasaran dan loyalitas konsumen* (Vol. 1). CV. Alfabeta.
- Iqbal, M., Dahlan, A., & Kholid Mawardi, F. M. (2015). Pengaruh Customer Experience Terhadap Kepuasan Pelanggan Dan Loyalitas Pelanggan (Survei pada Pelanggan KFC Kawi Malang). In *Jurnal Administrasi Bisnis (JAB)|Vol (Vol. 28, Issue 1)*.
- Japutra, A., Utami, A. F., Molinillo, S., & Ekaputra, I. A. (2021). Influence of customer application experience and value in use on loyalty toward retailers. *Journal of Retailing and Consumer Services*, 59, 102390.
- Jati Ariwibowo, D. P., & Nugroho, M. A. (2013). Pengaruh Trust Dan Perceived of Risk Terhadap Niat Untuk Bertransaksi Menggunakan E-Commerce. *Nominal, Barometer Riset Akuntansi Dan Manajemen*, 2(1), 11–35.
- Jogiyanto, & Abdillah, W. (2015). *Konsep dan Aplikasi PLS (Partial Least Square) untuk Penelitian Empiris*. BPFE.
- Kholis, N., & Maharama, A. R. (2018). Pengaruh Kepercayaan, Kemudahan dan Persepsi Risiko Terhadap Keputusan Pembelian Jasa Gojek di Kota Semarang Yang Dimediasi Minat Beli Sebagai Variabel Intervening. *EKOBIS*, 19(2), 203–213. <http://www.apjii.or.id>
- Kim, D., & Benbasat, I. (2003). Trust-Related Arguments In Internet Stores: A Framework For Evaluation. *Journal of Electronic Commerce Research*, 4(2). www.activesportshed.com

- Kim, D. J., Ferrin, D. L., Raghav RAO, H., Raghav, H., Ferrin Lee Kong, D. L., & Raghav Rao, H. (2008). Trust and Satisfaction, Two Stepping Stones for Successful E-Commerce Relationships: A Longitudinal Exploration. *Institutional Knowledge at Singapore Management University*, 20(2), 237–257. https://ink.library.smu.edu.sg/lkcsb_research
- Kim, G., Shin, B., & Lee, H. G. (2009). Understanding dynamics between initial trust and usage intentions of mobile banking. *Information Systems Journal*, 19(3), 283–311.
- Kotler, P., Keller, K. L., Columbus, B., New, I., San, Y., Cape, F. A., Dubai, T., Madrid, L., Munich, M., Montreal, P., Delhi, T., Sao, M. C., Sydney, P., Kong, H., Singapore, S., & Tokyo, T. (2016). *A Framework for Marketing Management Sixth Edition Global Edition*.
- Kusuma, M. H., & Rahim, S. E. (2021). The effectiveness of the new PLN mobile application in improving service quality, customer satisfaction, and electrifying lifestyle during the new normal period in Tanjung pandan city. *IOP Conference Series: Earth and Environmental Science*, 913(1).
- Lai, F., Griffin, M., & Babin, B. J. (2009). How quality, value, image, and satisfaction create loyalty at a Chinese telecom. *Journal of Business Research*, 62(10), 980–986.
- Lee, W. O., & Wong, L. S. (2016). Determinants of Mobile Commerce Customer Loyalty in Malaysia. *Procedia - Social and Behavioral Sciences*, 224, 60–67.
- Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: an exploration in business and consumer contexts using repertory grid technique. *Journal of the Academy of Marketing Science*, 39(6), 846–869.
- Li, X. (2014). Role of trust in the design and use of information technology and information systems. In *Computing Handbook, Third Edition: Information Systems and Information Technology*.
- Lin, H.-H., & Wang, Y.-S. (2006). An examination of the determinants of customer loyalty in mobile commerce contexts. *Information & Management*, 43(3), 271–282.
- Lovelock, C., & Wirtz, J. (2021). *Services Marketing: People, Technology, Strategy*, 7th edition (Issue June).
- McLean, G., Al-Nabhani, K., & Wilson, A. (2018). Developing a Mobile Applications Customer Experience Model (MACE)- Implications for Retailers. *Journal of Business Research*, 85(January), 325–336.
- McLean, Graeme., & Wilson, Alan. (2016). Evolving the online customer experience ... is there a role for online customer support? *Computers in Human Behavior*, 60, 602–610.
- Molinillo, S., Aguilar-Illescas, R., Anaya-Sánchez, R., & Carvajal-Trujillo, E. (2022). The customer retail app experience: Implications for customer loyalty. *Journal of Retailing and Consumer Services*, 65.
- Molinillo, S., Jiménez-Barreto, J., Rubio, N., & Campo, S. (2020). Linking the online destination brand experience and brand credibility with tourists' behavioral intentions toward a destination. *Tourism Management*, 79.
- Mowen, John. C., & Minor, M. (2012). *Consumer behavior* (1st ed.). Prentice Hall.
- Nadhif, A. Z., & Niswah, F. (2018). Inovasi layanan PLN mobile di PT. PLN (Persero) area Surabaya Selatan. *Publika*, 6(2). <https://jurnalmahasiswa.unesa.ac.id/index.php/27/article/view/22663>
- Natarajan, T., Balasubramanian, S. A., & Kasilingam, D. L. (2018). The moderating role of device type and age of users on the intention to use mobile shopping applications. *Technology in Society*, 53, 79–90.
- Oliver, R. L. (2010). *Satisfaction: A Behavioral Perspective on the Consumer* (2nd ed.). Routledge.
- Puriwat, W., & Tripopsakul, S. (2017). The Impact Of E-Service Quality on Customer Satisfaction and Loyalty In Mobile Banking Usage: Case Study Of Thailand. *Polish Journal of Management Studies*, 15(2), 183–193.
- Rizky, M., Pratama, D., & Jumhur, H. M. (2022). Pengaruh Customer Experience Terhadap Customer Loyalty Melalui Trust Sebagai Variabel Intervening Pada Aplikasi LinkAja. www.sociable.co/id,
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online Customer Experience in e-Retailing: An empirical model of Antecedents and Outcomes. *Journal of Retailing*, 88(2), 308–322.
- Roy, S. K., Balaji, M. S., Sadeque, S., Nguyen, B., & Melewar, T. C. (2017). Constituents and consequences of smart customer experience in retailing. *Technological Forecasting and Social Change*, 124, 257–270.
- Safriana, S. (2021). The Influence of Customer Experience on Customer Loyalty with Customer Satisfaction as an Intervening Variable in Xing Fu Tang Indonesia. 6(6), 1275–1284.
- Satryawati, E. (2018). Pengaruh Kepercayaan Dan Kepuasan Terhadap Loyalitas Pelanggan E- Commerce. *Jurnal Teknologi Informatika Dan Komputer*, 4(1), 36–52.
- Seddon, J., & Sant, R. (2007). Increasing Business Value through Improved Customer Experiences. *E-Perspectives*.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business : a skill-building approach* (J. Wiley, Ed.; Seventh ed). John Wiley & Sons Ltd. <http://lccn.loc.gov/2015051045>
- Senjaya, V., Semuel, H. Prof., Dr., S. E., MS., & Dharmayanti, D. S. E., M. Si. (2013). Pengaruh Customer Experience Quality Terhadap Customer Satisfaction & Customer Loyalty di Kafe Excelso Tunjungan Plaza Surabaya: Perspektif B2C. *Jurnal Manajemen Pemasaran Petra V*, 1(1), 1–15.

- Shankar, V., Kleijnen, M., Ramanathan, S., Rizley, R., Holland, S., & Morrissey, S. (2016). Mobile Shopper Marketing: Key Issues, Current Insights, and Future Research Avenues. *Journal of Interactive Marketing*, 34, 37–48. <https://doi.org/10.1016/j.intmar.2016.03.002>
- Siau, K., & Shen, Z. (2003). Building customer trust in mobile commerce (4th ed.). *Communications of the ACM*.
- Sugiyono, D. (2013). *Metode Penelitian Kuantitatif, Kualitatif, dan Tindakan*.
- Sugusti, R., & Ayuni, R. F. (2016). Pengaruh Dimensi Customer Experience Terhadap Satisfaction Dan Customer Loyalty (Studi Pada Cokelat Klasik Cafe Malang). 1–13.
- Szymanski, D., & Henard, D. (2001). Customer Satisfaction: A Meta-Analysis of the Empirical Evidence. *Journal of the Academy of Marketing Science*, 29, 16–35.
- Tjiptono, F. (2014). *Pemasaran Jasa: Prinsip, Penerapan dan Penelitian*.
- Vahdat, A., Alizadeh, A., Quach, S., & Hamelin, N. (2021). Would you like to shop via mobile app technology? The technology acceptance model, social factors and purchase intention. *Australasian Marketing Journal*, 29(2), 187–197.
- Venkat, R. (2007). Impact Of Customer Experience on Satisfaction, Brand Image and Loyalty: A Study In A Business-To-Business Context.
- Verkijika, S. F. (2018). Factors influencing the adoption of mobile commerce applications in Cameroon. *Telematics and Informatics*, 35(6), 1665–1674.
- Wang, H.-Y., Liao, C., & Yang, L.-H. (2013). What Affects Mobile Application Use? The Roles of Consumption Values. *International Journal of Marketing Studies*, 5(2).
- Widjianto, G. F. (2020). Analisa Pengaruh User Experience terhadap Customer Loyalty dengan Trust Sebagai Variabel Intervening Pada Aplikasi Digital Payment Dana. *Jurnal Strategi Pemasaran*, 7(1). <https://publication.petra.ac.id/index.php/manajemen-pemasaran/article/view/11286/9974>
- Wongso, D. A. (2020). Analisa User Experience Terhadap Customer Loyalty Dengan Trust Sebagai Variabel Intervening Pada Aplikasi Ovo Digital Payment. *Jurnal Strategi Pemasaran*, 7(1), 11.
- Wu, I.-S., & Chen, J.-Y. (2014). A Model of Green Consumption Behavior Constructed by the Theory of Planned Behavior. *International Journal of Marketing Studies*. Canadian Center of Science and Education, 6. ISSN 1918-719XE-ISSN 1918-7203
- Yosephine Simanjuntak, D. C., & Purba, P. Y. (2020). Peran Mediasi Customer Satisfaction dalam Customer Experience Dan Loyalitas Pelanggan. *Jurnal Bisnis Dan Manajemen*, 7(2), 171–184.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2018). *Services marketing: integrating customer focus across the firm* (7th Edition). McGraw Hill. <https://www.mheducation.com.au/services-marketing-integrating-customer-focus-across-the-firm-9781260083521>