

ANALYSIS OF FACTORS AFFECTING SATISFACTION AND LOYALTY OF DIGITAL LOAN CUSTOMER AT PT BANK XYZ

JAROT S. SUROSO¹, YOSEP WAHJUDI²

¹ Information Systems Management Department, Binus Graduate Program, Bina Nusantara University, Jakarta, Indonesia 11480, Indonesia

² Information Systems Management Department, Binus Graduate Program, Bina Nusantara University, Jakarta, Indonesia 11480, Indonesia

E-mail: ¹ jsembodo@binus.edu, ² yosep.wahjudi@binus.ac.id

ABSTRACT

Digital loan is one of the data processing methods, be it processing loan documents and information online via the internet, wireless, and other telecommunication systems without credit customers having to come to bank branches to make the desired credit application. PT BANK XYZ is a company engaged in banking in Indonesia. As a growing banking company with more than 400 branches throughout Indonesia and one of PT Bank XYZ's missions is to expand the office network for market penetration and financing in consumer centers, SME and corporate scale business sectors as well as increasing the level of competition among Indonesian banking companies, PT Bank XYZ developed digital loan technology in 2017 specifically for distribution of micro credit products. Customer satisfaction and loyalty are very important aspects for banks to win the competition in the digital market and retain existing customers in this technological era. The problem is, it is not high enough to meet the criteria for the best digital loan services to provide satisfaction to customers who apply for loans through digital loan applications. The purpose of this study was to determine the influence of factors, namely Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Perceived Service Quality, Perceived Functional Quality, Perceived Customer Experience, Brand Image and Digital Innovation on customer satisfaction and loyalty on digital loans. at PT. XYZ Bank. In this study, to analyze the factors that affect customer satisfaction and loyalty of digital loans at PT Bank XYZ, the researcher used a modified model of the Technology Acceptance Model (TAM). This type of research is quantitative research. 100 questionnaires were successfully collected from customers using the Digital Loan Application at PT Bank XYZ. The author analyzes the data collected using Partial Least Squares (PLS-SEM). PLS was chosen as the methodology for this study. The expected results of this research are factors, namely Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Perceived Service Quality, Perceived Functional Quality, Perceived Customer Experience, Brand Image and Digital Innovation whether it affects customer satisfaction and loyalty and how much influence to satisfaction. towards customer loyalty in applying for digital loans at PT Bank XYZ. This research is expected to help PT Bank XYZ to improve and innovate services in the field of digital loans and make better service improvements so that customer satisfaction and loyalty can always increase.

Keywords: *Banking Industry, Brand Image, Digital Loan, Digital Innovation, Perceived Ease of Use, Perceived Customer Experience, Perceived Functional Quality, Perceived Risk, Perceived Service Quality, Perceived Usefulness, Satisfaction, Loyalty, Technology Acceptance Model (TAM)*

1. INTRODUCTION

Nowadays, technology is not something new to developing countries like Indonesia, facts show that most of the mobile technology user are located in developing countries, the percentage of mobile user is 57%, followed by 18% of the internet user[1]. In Banking industries, technology starts to change the

ways of banking process, from traditional banking to digital banking where customer needs is delivered through innovative technologies like mobile banking and internet banking[2]. Banks need to expedite their digital transformation if they do not want to be left behind in this technologies and digital era.

Therefore, PT BANK XYZ, which is one of the companies engaged in banking in Indonesia. As a growing banking company with more than 400 branches throughout Indonesia and one of the missions of PT Bank XYZ is to expand the office network for market penetration and financing at the consumer, SME and corporate-scale business sectors as well as increasing the level of competition between banking companies in Indonesia, PT Bank XYZ developed digital loan technology in 2017 specifically for the distribution of micro credit products.

Table 1: Total Digital Loan Customers of PT Bank XYZ for the 2017 - 2019 Period

Period	Total Customer	Loan Amount
2017	2,636	583,965,378,733
2018	2,512	647,598,255,272
2019	2,758	773,896,720,707

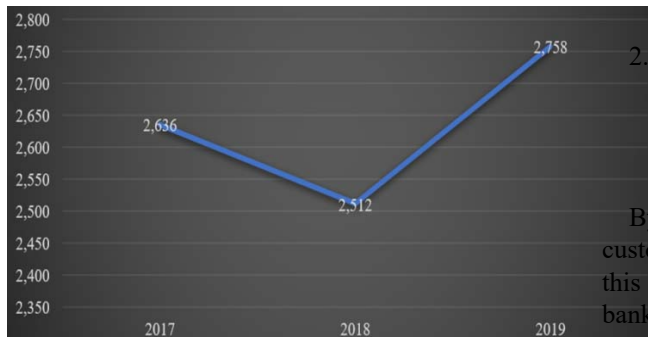


Figure 1: Graph of PT Bank XYZ Total Digital Loan Customers for the 2017 - 2019 Period

Based on Table 1 and Figure 1 above, the problem faced by PT Bank XYZ is that from the beginning of the digital loan application, from 2017 to 2019, it experienced ups and downs in the number of customers who made loan applications. If you look at the overall total digital loan customers, the number of digital loan customers at PT Bank XYZ has increased and decreased. Customers who submitted digital loan applications to PT bank XYZ in 2017 were 2,636 digital loan customers who submitted and were approved by PT Bank XYZ. In 2018, customers who applied for digital loans at PT bank XYZ experienced a decrease compared to 2017 by 124 points, namely 2,512 digital loan customers who submitted and approved by PT Bank XYZ and in 2019 customers

who submitted digital loan applications at PT. bank XYZ has increased again compared to 2018 by 246 points, namely 2,758 digital loan customers who submitted and approved by PT Bank XYZ. It can be said that it is not high enough to meet the criteria for the best digital loan service to provide satisfaction to customers who make applications through digital loan applications. Meanwhile, customer satisfaction and loyalty are very important aspects for banks to win the competition in the digital market and retain existing customers in this technological era. Maintain a loyal customer will help banking to have a long relationship with the customer. A loyal customer will always attach to the banking and will not go to seek others competitor[3].

Based on the purpose and the background of this research, the main question that we want to investigate in this research are summarized as follow:

1. What are the factors that affect customer satisfaction and loyalty in applying for loans through the digital loan application at PT Bank XYZ?
2. How much influence does satisfaction have on customer loyalty in applying for loans through digital loan application at PT Bank XYZ?

By knowing the factors that influence digital loan customer satisfaction and loyalty at PT Bank XYZ, this study is expected to be the basis of research for banks to develop customer satisfaction and loyalty programs. For academic purposes, this study can be a reference for further research on customer loyalty and other factors that influence it.

2. LITERATURE REVIEW

2.1 Banking Industry

Banking is an industry that is formed by the existence of demand and which is an important part in the service industry. Changes in regulations, structural and technology have occurred in the world of banking business where it is in line with the era leading to an integrated global banking business. The Bank develops all aspects of service and offers various types of competitive services and also develops in terms of technology so that it becomes faster and more efficient to meet all customer needs. With the development of a very fast and dynamic era where the level of competition between banks is also very high, the banks must think of the strategies they have to run can make

customers become satisfied and optimize service to customers. It can be said that the bank is an industry whose level of change is very high[4].

Banks that have advantages in terms of service can have advantages compared to other banks namely from a different marketing side because service quality is associated with high income, an increase in cross sell ratio, customer retention is also and broad market share[5].

In the banking world, the quality of service of a bank considered to be very important for many years. This point is likely the result of reduced customer loyalty to a bank that affects some of the banking industry. Therefore, implementing high quality services is the main objective in banking operations[5].

2.2 Digital Loan

Digital loan is one of the data processing methods, be it processing loan documents and information online via the internet, wireless, and other telecommunication systems without credit customers having to come to bank branches to make the desired credit application[6].

According to Daniel Bjorkegren and Darrell Grissen[7], digital loan or digital credit can occur due to several recent innovations:

1. Mobile Phones

It was first adopted for person-to-person communication and is also a form of plate that can connect consumers in developing countries with digital services.

2. Mobile money

Built using this platform, so it can reduce money transfer costs. Can be used as savings, by saving money in a personal account.

2.3 Perceived Ease of Use

Perceived ease of use is one of the factors that affect customer satisfaction, perceived ease of use is defined as the perceived ease of use or perceived ease of use as the level of how much someone can believe that using a system will not make it difficult[8]. In the context of digital loans, this definition means that the use of a digital loan application must be easy to understand, easy to understand, and does not require a lot of effort to learn how to use it to apply for credit digitally.

The easier a technology is to use, the more likely it is that the technology will be accepted by the wider community[9]. In the era of digital technology, Perceived Ease of Use often conflicts with perceptions of digital security. To make a safe

digital application, features are needed that make the application more difficult to use.

There are several previous studies that discuss perceived ease of use, one of which is a journal written by Ward Abdullah in 2016 which discusses customer loyalty in terms of Perceived Ease of Use and Perceived Usefulness[10]. According to Ward Abdullah, Perceived Ease of Use and Perceived Usefulness are important factors that influence student interest in using e-portfolios in higher education. The element of Perceived Ease of Use that has the highest influence is the ease of using a computer.

2.4 Perceived Usefulness

Perceived Usefulness is defined as an individual's perception that the use of technology can improve the performance of that person[11]. Perceived Usefulness in a digital context can be defined as the extent to which digital technology can help someone to improve the performance of their work. If someone feels that the digital application that they use is useful in helping their work, then that person will continue to use the application. Conversely, someone will not use a digital application if the application does not provide any benefits.

The perceived usefulness has a direct influence on customer attitudes in doing digital transactions, there are at least 5 categories of benefits from digital technology, namely fast, time saving, energy saving, reducing costs, and overall benefits[12].

Journal written by Almahamid in 2010 about Perceived Usefulness, Perceived Ease of Use, Perceived Information Quality [13] shows that the citizens of Jordan find e-government systems very useful and easy to use but do not have high quality information. In other words, the quality of the information displayed on the E-Government website does not meet the expectations of citizens, and this can hinder the implementation of E-Government in Jordan. From this research, it can be concluded that perceived usefulness is a factor that affects community satisfaction in the digital and E-Government fields.

2.5 Perceived Risk

Perceived Risk is defined as the risk or uncertainty arising from differences between the end result and the results expected by the customer[14]. If customers find that the results of their digital transactions are not in accordance with the expected results, then customers tend to no longer use the same digital transaction media.

The level of risk in transactions depends on consumer perceptions in estimating the level of risk that will be experienced when using digital applications to transact. Perceived risk is the identification of risks that customers can experience in connection with transactions using digital technology[15]. Indirectly, Perceived Risk is closely related to IT technology. Various digital security issues, such as digital hacking and theft of customer data, have a strong enough influence on customers' interest in always transacting digitally[16].

2.6 Perceived Service Quality

Service Quality related to customer thought and expectation about the perfection of the service provided by the company, or in another word, service quality is related to customer expectation about the outcome (result) quality and process quality of a product or services generated by the company or industries[17]. Services quality is not only discuss about the quality of the product or services, but it also discuss about the process how the product or services is delivered [17].

Early studies by Grönroos,1984, also divides service quality into two dimensions, that dimension are functional quality and technical quality. Functional quality is refer to how the process to deliver the product or services, meanwhile, technical quality is refer to what is the result or output of the product or services itself[18].

To get the best service quality result, company or industry need to maintain their relationship with the customer (people element), fix the facility and technology they are used (physical element), and fix the overall process (process element)[19].

Parasuraman, et al in 1985 have proposed a new dimension of service quality known as SERVQUAL[20]. There is 10 dimension of service quality in SERVQUAL, but later on it has been reduced to 5 common dimensions of service quality as follow: reliability, tangibles, assurance, responsiveness, and the last one is empathy.

Several previous studies have try to measure the service quality factors in SERVQUAL[21], and the result show that the dimension of service quality in SERVQUAL can describe customer perceptions and customer expectations about service quality [21].

2.7 Perceived Functional Quality

Functional quality is a way of how the service is provided, or from the customer point of view, functional quality can be described as customer perception that exist during the service process are provided and relate to the customer expectation and customer experience when receiving a service[22].

Functional service quality has been detailed in previous literature run and conceptualized, one of the studies is in E-SQUAL. E-SQUAL has researched the quality dimensions of e-service[23], Several dimension in e-service quality like efficiency (related to how simple the services is delivered), responsiveness (related to how fast the service response if there is any problem), system availability, flexibility (related to several choice of ways to do the services), fulfilment, and privacy are categorized as functional quality[24].

2.8 Perceived Customer Experience

Perceived Customer Experience is a perception that captures what consumers think about a company when consumers make direct or indirect contact with the company [25]. In a digital context, Customer Experience can be interpreted as the impression of a customer in making digital transactions starting from installing applications, making transactions, to experiences after transactions are completed. Customer Experience does not only occur when a customer makes a transaction, but must also pay attention to the bigger picture, namely the customer end-to-end journey [26].

2.9 Brand Image

Brand Image can be defined as a set of consumer perceptions of a brand that is formed in the minds of consumers. Consumers who are accustomed to buying or using products and services with certain brands will have a tendency to always be consistent with the brand image, or in other words, these consumers will stick to the brand personality[27].

According to Simaora, Brand Image has 3 main components, namely Corporate image, user image, and product image[28].

1. Corporate image is the consumer's perception of a company that provides a product or service, the perception that is formed can come from the big name of the company, the company's network, or from the quality of services provided by the company.
2. User image is the consumer's perception of

users or users who use a product or service, the perception that is formed can come from user characteristics such as nationalism, following trends, confidence, attractiveness, and so on.

Product image is the consumer's perception of the goods or services it uses. Perceptions that are formed can come from the quality of the product, the color of the product, the design of the product, or the size of the product.

2.10 Digital Innovation

Digital Innovation can be defined as new development / innovation which is a combination of digital technology and physical components to produce a new product innovation[29]. Digital Innovation is a new idea in terms of products, processes and business models. The resulting new product combination must be digital, for example: changing normal information to digital format. Digital products are easier to program, track, and communicate. Digital Innovation is a new idea in terms of products, processes and business models. Digital Innovation was born from the increasing market demands for better service quality and product quality and also as a result of the development of customer demand that continues to increase the need for technology-based services that are fast, safe and easy[30].

2.11 Customer Satisfaction

Customer satisfaction is defined as a feeling or emotional assessment of consumers / customers on the use of products and services where the expectations and needs of consumers are met[31].

Customer satisfaction is determined by the quality of products and services desired by customers, so that quality assurance is a top priority for the bank. For customer satisfaction with service, there are two main things that are closely related, namely customer expectations of service quality (expected quality) and customer perceptions of service quality (perceived quality)[32]. Measuring customer satisfaction is the same as measuring how customers perceive the performance of a product / service.

Several studies have measured customer satisfaction based on measurements of the customer attitude and service quality of a product / service received by the customer (attitude and quality). The better the quality of a product / service received by the customer, it can be assumed that the customer satisfaction level will automatically increase[33].

2.12 Customer Loyalty

Customer loyalty is a constant and positive attitude and response of a customer towards a brand or company. Customer loyalty is one of the factor that can increase company business profit, customer loyalty can also be considered a part of company capital if included in the valuation of a company[34].

The rapid development in the world of information technology, the intense competition in the era of globalization, and market saturation make companies build their success on relationships with customers in the long run. Creating loyal customers becomes more important because of increased competition and a concentrated market[35].

There are two types of customer loyalty, long term customer relationship loyalty and the second one is short term customer relationship. Long-term means that customers will keep using the existing product and will not going to be that easy to replace it with another product. Whereas short-term customers will very easily switch to other brands or companies to get better products or equivalent services. Customers with high loyalty have a great desire to make recommendations about a brand or company to their friends, contacts, and relatives[36].

2.13 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a model that can be used to analysis the factors that influence the acceptance of an information system.

To find out the analysis of the level of acceptance of information systems used in the library can use the TAM model. Thus, TAM is an analytical knife used to determine user acceptance of the technology's presence.

TAM is a type of theory that uses an attitude theory approach which is widely used to study the process of information technology adoption. However, such a good model should not only predict, but ideally should also be able to explain. It seems that the TAM model and its indicators have been tested to measure technology acceptance. This using TAM will be able to explain why the library information system used in the library can be accepted or not by the user.

In accordance with the term TAM, that "A" stands for "Acceptance" means acceptance. So it

can be said that TAM is an analytical model to determine user attitude regarding technology acceptance. If you look at the meaning of TAM from Wikipedia, "TAM is an information systems theory that models how users come to accept and use a technology". The point is that TAM is an information system theory which models how users come to accept and use technology.

Through Technology Acceptance Model (TAM), the assumption is that when the user will use the new information system, there are 2 (two) factors that influence it:

1. Perception of Ease of Use, Davis (1989) it is stated that "ease" means "freedom from difficulty or great effort". Furthermore, "ease to use perceived" is defined as "the degree to which a person believes that using a particular system would be free of effort".
2. Perception of Usefulness, Davis (1989) states that "the degree to which a person believes that using a particular system would enhance his or her job performance." This means that users believe that using the library information system will improve its performance.

Research from Edwin and Harjanti where research discusses the effect of service quality, perceived value, perceived usefulness, and perceived ease of use on passenger satisfaction and passenger loyalty on travel services in Kupang, East Nusa Tenggara, where the results show that quality services, perceived value, perceived usefulness, and perceived ease of use have a positive effect on passenger satisfaction, and passenger satisfaction has a positive effect on passenger loyalty[37].

3. RESEARCH METHODOLOGY

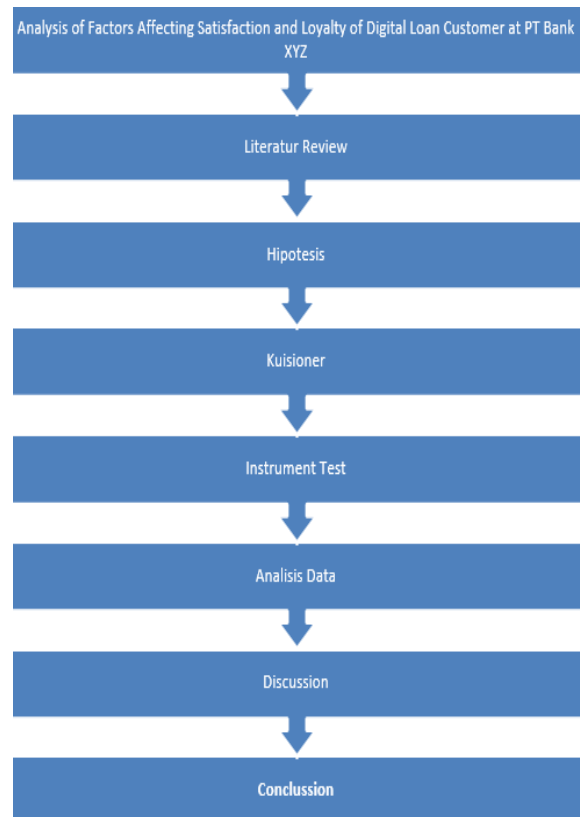


Figure 2: Research Methodology

Base on the research methodology in Figure 2, the research begins by making a research plan starting from the preparation of research materials, research design, research procedures, testing methods and data collection.

Research materials were collected and combined by researchers from some previous literature / research through the internet media.

From these research materials then a hypothesis is designed which is formed from the results of other related research and from related theoretical references. With statistical methods, the truth of each hypothesis is examined.

This study aims to determine what factors influence the satisfaction and loyalty of digital loan customers in using digital loan applications at PT Bank XYZ and how much influence these factors have.

In this study, researchers used the TAM model because they wanted to examine how technology relates to customer / customer behavior. Therefore, in the current study, researchers also used a modified the TAM (Technology Acceptance

Model) model to see the relationship between Digital Loan application technology and customer behavior in applying for digital loans at PT Bank XYZ. The factors used as variables in this study were taken from various journals, literature reviews, books, as well as from previous studies which were then combined into a research model. There are 10 variables that will be used in this research which consists of 8 independent variables (Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Perceived Service Quality, Perceived Functional Quality, Perceived Customer Experience, Brand Image and Digital Innovation) and 2 dependent variables (Customer Satisfaction and Customer Loyalty). The research model is then proven empirically in the form of a hypothesis with the data obtained from the questionnaire.

The model proposed in this study takes a reference from the research model from [37] where the study discusses the effect of service quality, perceived value, perceived usefulness, and perceived ease of use on passenger satisfaction and passenger loyalty in travel services in Kupang., East Nusa Tenggara. The model proposed in this study is in Figure 1 where the author wants to examine the influence of 8 independent variables (independent (Perceived Ease Of Use, Perceived Usefulness, Perceived Risk, Perceived Service Quality, Perceived Functional Quality, Perceived Customer Experience, Brand Image and Digital Innovation)) whether it affects customer satisfaction and loyalty in applying for a digital loan at PT Bank XYZ. Figure 1 is the conceptual model or research model of this research:

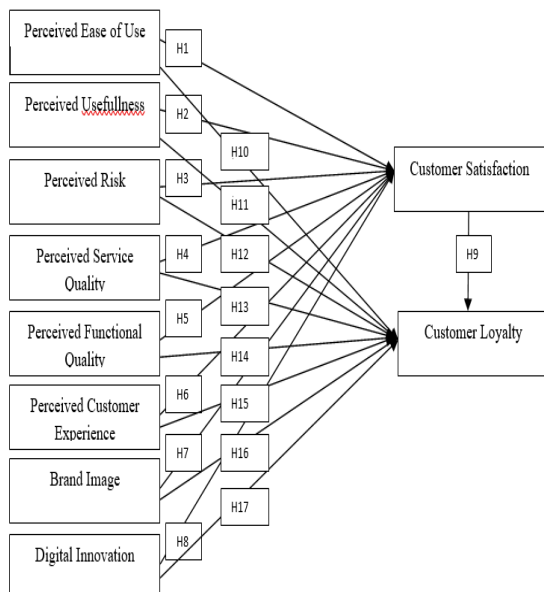


Figure 3: Research Model

3.1 Hypothesis

Base on the conceptual model in Figure 3, below is the hypothesis of this research:

- H1: Perceived Ease of use has a positive influence on customer satisfaction.
- H2: Perceived Usefulness has a positive influence on customer satisfaction.
- H3: Perceived Risk has a positive influence on customer satisfaction.
- H4: Perceived Service Quality has a positive influence on customer satisfaction.
- H5: Perceived Functional Quality has a positive influence on customer satisfaction.
- H6: Perceived Customer Experience has a positive influence on customer satisfaction.
- H7: Brand Image has a positive influence on customer satisfaction.
- H8: Digital Innovation has a positive influence on customer satisfaction.
- H9: Customer satisfaction has a positive influence on customer loyalty.
- H10: Perceived Ease of use has a positive influence on customer loyalty.
- H11: Perceived Usefulness has a positive influence on customer loyalty.
- H12: Perceived Risk has a positive influence on customer loyalty.
- H13: Perceived Service Quality has a positive influence on customer loyalty.
- H14: Perceived Functional Quality has a positive influence on customer loyalty.
- H15: Perceived Customer Experience has a positive influence on customer loyalty.
- H16: Brand Image has a positive influence on customer loyalty.
- H17: Digital Innovation has a positive influence on loyalty customer.

3.2 Operational Variable

There are 8 independent variables and 2 dependent variables used in this research. Independent variable like functional quality is a variable that influence another variable, meanwhile, direct variable is a variable that has been influencing by another variable. Table 2 is listed all the variable and indicator used in this research. We are using three indicators for every variable used in this research.

Table 2: Variables and indicator for questionnaire

Variables	Indicator
Perceived Ease of use (PEOU) [8]	PEOU1: Application easy to use. PEOU2: The features in the application are easy to understand. PEOU3: Easy to access and stable application.

Perceived Usefulness (PU) [11]	PU1: Saving time. PU2: Save energy. PU3: The required information is complete and clear.
Perceived Risk (PR) [14]	PR1: Trust in the integrity of personal data. PR2: Trust in the accuracy of the information provided. PR3: Trust in the confidentiality of user ID and password.
Perceived Service Quality (PSQ) [38]	PSQ1: Customer Services staff assistance. PSQ2: Responsiveness of Customer Services staff. PSQ3: Courtesy and capability of Customer Services staff.
Perceived Functional Quality (PFQ) [39]	PFQ1: Digital loan application loading time. (efficiency aspect) PFQ2: Frequency of application errors / crashes. (system availability aspect) PFQ3: Application functions as expected. (Fulfilment aspect)
Perceived Customer Experience (PCE) [25]	PCE1: Impressions during the installation and registration of digital loan applications PCE2: Impressions during credit transactions using digital loan applications. PCE3: Bad experience using digital loan applications
Brand Image (BI) [27]	BI1: Impression of XYZ bank (corporate image) BI2: User impression of digital loan facilities (user image) BI3: Impressions of the digital loan application (product image)
Digital Innovation (DI) [29]	DI1: Application of new digital loan technology DI2: Digital technology innovation makes loan transactions easier. DI3: Digital innovation is important for banking
Customer Satisfaction (SC) [31]	SC1: Feelings comfortable with digital loans SC2: Positive things about the digital loan application SC3: Satisfaction with the digital loan application
Customer loyalty (LC) [34]	LC1: Loyalty towards digital loan applications LC2: Trust in digital loan applications LC3: Recommend to other parties/Friends

3.3 Data Collection Method

This research is using quantitative methods and data collected using questionnaire. Questionnaire is the most common method of collecting data for a study or for a research purpose, the popularity of the questionnaire in research is because the

questionnaire is very easy to build, flexible, and can quickly collect information in a unique way in a form that is ready to be processed[40]. Questionnaire is very suitable for measuring people's attitudes and opinions [41] and asking questions is a natural way to gather information [40]. Respondents in this research were digital loan customers of PT Bank XYZ who had submitted more than 1 loan submission (type of micro credit) and were approved by PT Bank XYZ. In this study, determining the minimum sample size, researchers used the Slovin calculation formula. This formula is used because the population obtained is 1,571 customers. Based on calculations using the Slovin calculation formula, it was found that $94.01 = 94$ respondents. To increase the accuracy of this study, the researchers increased the number of respondents to 100 respondents. The demographics condition of the survey respondents is show in Table 3 below.

The respondents consist of 58 males (58%) dan 42 females (42%). The Business fields of the respondents, with 62% of them are trading, 27% are service, 7% are automotive and 4% are material business.

With questionnaire method for collecting data, we can learn to measure and calculate responses from respondents and can be researched statistically [41]. Quantitative methods with questionnaire aim to answer questions such as "how much"[42]. In this research, we are using a 5 points of Likert scale to measure "how much" a respondent agreement and disagreement related to several statement. 1 (one) can be represented as strongly disagree, meanwhile 5 (five) can be represented as strongly agree.

Table 3: Demographics result of survey respondents.

	Category	Number	Percentage
Gender	Male	58	58%
	Female	42	42%
Branch Area	Jakarta	66	66%
	Bandung	8	8%
	Bogor	26	26%

3.4 Data Analysis Method

For data analysis, we are using Partial Least Square (PLS). PLS is a structural equation model or know as SEM. SEM is one area of statistical studies that can test a series of relationships that are relatively difficult to measure simultaneously.

PLS can be used to overcome the problem of relationships between one variable to another, but the sample size of the data is quite small. PLS can

be a valid tools with the data sample less than 100 data[43]. For this research, we use Smart PLS Application version 3.3.2 as a software to do the PLS analysis and modelling. There are 3 kind of test that we want to do with PLS, which is validity dan reliability test, Path Coefficient (inner loading value) and Coefficient of Determination (R^2) test, and T-statistics test.

4. RESULT AND DISCUSSION

4.1 Validity Test

This validity test was carried out on the object of research with a sample of 100 samples collected. The purpose of this data validity test is to determine whether a variable or indicator is valid enough to be used in this study. The basis for making decisions on this validity test is as follows:

1. An indicator is declared valid if it has a loading factor above 0.7 against the intended construct[43].
2. Average Variance Extracted (AVE), the expected value is > 0.5 . [43].

The following are the results of the validity test using the Smart PLS Application version 3.3.2 based on the loading factor value and the Average Variance Extracted (AVE) value of all variables and indicators.

Table 4: Test of the Validity of the Loading Value of Indicator Factors with Latent Variables

Variable	Indicator	Outer Loading Value	Description
Perceived Ease of use (PEOU)	PEOU1	0.978	Valid
	PEOU2	0.980	Valid
	PEOU3	0.979	Valid
Perceived Usefulness (PU)	PU1	0.989	Valid
	PU2	0.976	Valid
	PU3	0.976	Valid
Perceived Risk (PR)	PR1	0.969	Valid
	PR2	0.965	Valid
	PR3	0.970	Valid
Perceived Service Quality (PSQ)	PSQ1	0.986	Valid
	PSQ2	0.980	Valid
	PSQ3	0.985	Valid
Perceived	PFQ1	0.978	Valid

Functional Quality (PFQ)	PFQ2	0.978	Valid
	PFQ3	0.974	Valid
Perceived Customer Experience (PCE)	PCE1	0.978	Valid
	PCE2	0.985	Valid
	PCE3	0.985	Valid
Brand Image (BI)	BI1	0.977	Valid
	BI2	0.984	Valid
	BI3	0.984	Valid
Digital Innovation (DI)	DI1	0.981	Valid
	DI2	0.979	Valid
	DI3	0.976	Valid
Customer Satisfaction (SC)	SC1	0.981	Valid
	SC2	0.981	Valid
	SC3	0.981	Valid
Customer Loyalty (LC)	LC1	0.986	Valid
	LC2	0.978	Valid
	LC3	0.979	Valid

Based on Table 4 above, all the variables represented by 3 statements are all valid and can be used in research because they have an outer loading / loading factor value greater than 0.7.

Table 5: Validity Test -Average Variance Extracted (AVE) Parameters

Variable	Average Variance Extracted (AVE)	Description
Perceived Ease of Use (PEOU)	0.959	Valid
Perceived Usefulness (PU)	0.961	Valid
Perceived Risk (PR)	0.937	Valid
Perceived Service Quality (PSQ)	0.967	Valid
Perceived Functional Quality (PFQ)	0.954	Valid
Perceived Customer Experience (PCE)	0.966	Valid
Brand Image (BI)	0.963	Valid
Digital Innovation (DI)	0.958	Valid
Customer Satisfaction (SC)	0.962	Valid

Customer Loyalty (LC)	0.963	Valid
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Based on Table 5 above, all variables are all valid and can be used in research because they have an Average Variance Extracted (AVE) value greater than 0.5.

4.2 Reliability Test

Testing the reliability of the questionnaire data as part of the evaluation of the measurement model (outer model) is carried out according to the criteria below, namely:

- Composite Reliability (CR). The variable is declared reliable if it has composite reliability > 0.7[43].
- Cronbach Alpha. Reliability test is strengthened by Cronbach Alpha. The expected value is > 0.6 for all constructs[43].

To test the validity of the data, the Smart PLS Application program was assisted by using the "PLS Algorithm" method.

Following are the results of the reliability test using the Smart PLS Application version 3.3.2 based on the Composite Reliability value and Cronbach Alpha value of all variables.

Table 6: Reliability Test - Composite Reliability Parameters

Variable	Composite Reliability (CR)	Description
Perceived Ease of Use (PEOU)	0.986	Reliable
Perceived Usefulness (PU)	0.987	Reliable
Perceived Risk (PR)	0.978	Reliable
Perceived Service Quality (PSQ)	0.989	Reliable
Perceived Functional Quality (PFQ)	0.984	Reliable
Perceived Customer Experience (PCE)	0.988	Reliable
Brand Image (BI)	0.988	Reliable
Digital Innovation (DI)	0.986	Reliable
Customer Satisfaction (SC)	0.987	Reliable
Customer Loyalty (LC)	0.987	Reliable

Table 7: Reliability Test - Cronbach's alpha Parameters

Variable	Cronbach Alpha	Description
Perceived Ease of Use (PEOU)	0.978	Reliable
Perceived Usefulness (PU)	0.980	Reliable
Perceived Risk (PR)	0.966	Reliable
Perceived Service Quality (PSQ)	0.983	Reliable
Perceived Functional Quality (PFQ)	0.976	Reliable
Perceived Customer Experience (PCE)	0.982	Reliable
Brand Image (BI)	0.981	Reliable
Digital Innovation (DI)	0.978	Reliable
Customer Satisfaction (SC)	0.980	Reliable
Customer Loyalty (LC)	0.981	Reliable

4.3 Inner Model Test

The structural model at this stage is to see the significance of the relationship between latent variables by looking at the path coefficient which shows whether or not there is a relationship between latent variables in the research model. To evaluate the structural model starting from looking at the R-Square (R²) value for each prediction of the structural model, the R² value is used to explain the effect of certain latent (exogenous) variables on the latent (endogenous) variable or how much influence it has[43].

Following are the results of the structural model test using the Smart PLS Application version 3.3.2 based on the R-Square (R²) value and the Path Coefficient value.

Table 8: R² Value on Dependent Variable

Variable	R-Square(R ²)
Customer Loyalty (LC)	0.965
Customer Satisfaction (SC)	0.960

Based on the R-Square (R²) criteria based on Hair (Hair, Sarstedt, Ringle and Mena, 2012), namely that the R-Square (R²) result is 0.75; 0.5 and 0.25 for endogenous latent variables in the structural model indicate that the model is "good", "moderate", and "weak". Table 4:14 shows the R-Square (R²) value of the 2 dependent variables

tested in this study, namely the variable customer loyalty and customer satisfaction, which shows a good R-Square (R²) value because the R-Square (R²) value of the two variables is in above 0.75. Table 7 gives a value of 0.965 for the construct Customer Loyalty (LC) which means that the variables Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Perceived Risk (PR), Perceived Service Quality (PSQ), Perceived Functional Quality (PFQ), Perceived Customer Experience (PCE), Brand Image (BI), Digital Innovation (DI) and Customer Satisfaction (SC) are able to explain / influence the variance of Customer Loyalty (LC) by 96.5%. The value of R is also found in Customer Satisfaction (SC) which is influenced by Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Perceived Risk (PR), Perceived Service Quality (PSQ), Perceived Functional Quality (PFQ), Perceived Customer Experience (PCE), Brand Image (BI), Digital Innovation (DI) amounting to 96%.

Table 9: Path Coefficient and T-Statistics

	Path Coefficient	T Statistics	P-Values	
Brand Image (BI) → Loyalty Customer (LC)	0,351	2,260	0,024	Perceived Easy of Use (PEOU) → Loyalty Customer (LC)
Brand Image (BI) → Satisfaction Customer (SC)	0,279	2,187	0,029	Perceived Easy of Use (PEOU) → Satisfaction Customer (SC)
Digital Innovation (DI) → Loyalty Customer (LC)	0,051	0,922	0,357	Perceived Functional Quality (PFQ) → Loyalty Customer (LC)
Digital Innovation (DI) → Satisfaction Customer (SC)	0,107	1,452	0,147	Perceived Functional Quality (PFQ) → Satisfaction Customer (SC)
Perceived Customer Experience (PCE) → Loyalty Customer (LC)	0,067	0,510	0,610	Perceived Risk (PR) → Loyalty Customer (LC)
Perceived Customer Experience (PCE) → Satisfaction Customer (SC)	-0,030	0,221	0,825	Perceived Risk (PR) → Satisfaction Customer (SC)
				Perceived Service Quality (PSQ) → Loyalty Customer (LC)
				Perceived Service Quality (PSQ) → Satisfaction Customer (SC)
				Perceived Usefulness (PU) → Loyalty Customer (LC)
				Perceived Usefulness (PU) → Satisfaction Customer (SC)
				Satisfaction Customer (SC) → Loyalty Customer (LC)

The path coefficient is used to check the significance of the relationship between latent variables and the bootstrapping process which produces a t-statistic value (the Smart PLS Application program produces a p-value). The t-statistic value will be compared with the t-table. If the t-statistic value is greater than the t-table (or p-value $\leq \alpha$), the related variable is declared to have a significant effect. For the confidence level of 95% ($\alpha = 5\%$), then the T-table is used as a reference of 1.96. A positive value on the path coefficient indicates that the related variables have a positive effect, on the contrary, if the path coefficient value is negative, the related variable has a negative effect.

Based on Table 9 above, the path coefficient model results are obtained by using Smart PLS Application 3.3.2 with a bootstrapping procedure.

4.4 Hypothesis Analysis

The main hypotheses in this study are:

1. To find out what factors affect the satisfaction and loyalty of digital loan customers at PT Bank XYZ

Table 10 shows that:

a. Path coefficient Perceived Easy of Use (PEOU) \rightarrow Customer Satisfaction has a p-value below 0.05. So it can be concluded that Perceived Easy of Use (PEOU) has a positive and significant effect on Customer Satisfaction

b. Path coefficient Brand Image (BI) \rightarrow Customer Satisfaction has a p-value below 0.05. So it can be concluded that Brand Image (BI) has a positive and significant effect on Customer Satisfaction

c. Path coefficient Brand Image (BI) \rightarrow Customer Loyalty has a p-value below 0.05. So it can be concluded that Brand Image (BI) has a positive and significant effect on Customer Loyalty

d. Path coefficient Perceived Risk (PR) \rightarrow Customer Loyalty has a p-value below 0.05. So it can be concluded that Perceived Risk (PR) has a negative and significant effect on Customer Loyalty

2. Does customer satisfaction have a positive and significant effect on digital loan customer loyalty at PT Bank XYZ.

Table 10 shows the path coefficient of customer satisfaction \rightarrow customer loyalty has a p-value below 0.05. So it can be concluded that customer satisfaction has a positive and significant effect on digital loan customer loyalty at PT Bank XYZ,

which means that H0 is rejected and H1 is accepted.

The results of hypothesis testing in this study can be seen in table 10 below.

Table 10.:Hypothesis Analysis

Hypothesis		Path Coefficient	P-Values	Result
Code	Variable			
H1	Perceived Easy of Use (PEOU) \rightarrow Satisfaction Customer (SC)	0,239	0,034	Accept
H2	Perceived Usefulness (PU) \rightarrow Satisfaction Customer (SC)	0,112	0,396	Reject
H3	Perceived Risk (PR) \rightarrow Satisfaction Customer (SC)	0,027	0,762	Reject
H4	Perceived Service Quality (PSQ) \rightarrow Satisfaction Customer (SC)	0,000	0,996	Reject
H5	Perceived Functional Quality (PFQ) \rightarrow Satisfaction Customer (SC)	0,267	0,063	Reject
H6	Perceived Customer Experience (PCE) \rightarrow Satisfaction Customer (SC)	-0,030	0,825	Reject
H7	Brand Image (BI) \rightarrow Satisfaction Customer (SC)	0,279	0,029	Accept
H8	Digital Innovation (DI) \rightarrow Satisfaction Customer (SC)	0,107	0,147	Reject
H9	Satisfaction Customer (SC) \rightarrow Loyalty Customer (LC)	0,564	0,001	Accept
H10	Perceived Easy of Use (PEOU) \rightarrow Loyalty Customer (LC)	0,011	0,921	Reject
H11	Perceived Usefulness (PU) \rightarrow Loyalty Customer	0,101	0,412	Reject

	(LC)			
H12	Perceived Risk (PR) → Loyalty Customer (LC)	-0,206	0,041	Accept
H13	Perceived Service Quality (PSQ) → Loyalty Customer (LC)	-0,014	0,796	Reject
H14	Perceived Functional Quality (PFQ) → Loyalty Customer (LC)	0,063	0,586	Reject
H15	Perceived Customer Experience (PCE) → Loyalty Customer (LC)	0,067	0,610	Reject
H16	Brand Image (BI) → Loyalty Customer (LC)	0,351	0,024	Accept
H17	Digital Innovation (DI) → Loyalty Customer (LC)	0,051	0,357	Reject

5. CONCLUSSION

The purpose of this study is to determine what factors affect customer satisfaction and loyalty in using digital loan applications at PT Bank XYZ. The model proposed in this study uses the Technology Acceptance Model (TAM) and is added with several factors obtained from various journals, literature reviews, books, as well as from previous studies which are then combined into a research model. The results of this study indicate that:

- The results of the study state that the first hypothesis (H1), namely the Perceived Easy of Use (PEOU) variable has a positive and significant effect on digital loan customer satisfaction at PT Bank XYZ. This is from Table 9 shown by the path coefficient value of the PEOU of 0.239, which states that each increase of 1 unit Perceived Easy of Use will increase

digital loan customer satisfaction at PT Bank XYZ by 0.239 units. The p-value, which is smaller than 5%, which is 0.034 <0.05, means that Perceived Easy of Use has an influence on digital loan customer satisfaction at PT Bank XYZ.

- The results of the study state that the seventh hypothesis (H7), namely the Brand Image (BI) variable has a positive effect on digital loan customer satisfaction at PT Bank XYZ. This is from Table 9 shown by the BI path coefficient value of 0.279, which states that each increase in Brand Image by 1 unit will increase digital loan customer satisfaction by 0.279 units. The p-value is smaller than 5%, which is 0.029 <0.05, means that the Brand Image has an influence on digital loan customer satisfaction at PT Bank XYZ.
- The results of the study state that the ninth hypothesis (H9) is that the Customer Satisfaction (SC) variable has a positive effect on digital loan customer loyalty at PT Bank XYZ. This is from Table 9 shown by the SC path coefficient value of 0.564, which states that each 1 unit increase in Customer Satisfaction will increase digital loan customer loyalty by 0.564 units. The p-value is smaller than 5%, which is 0.001 <0.05, means that customer satisfaction has an influence on digital loan customer loyalty at PT Bank XYZ.
- The results of the study state that the twelfth hypothesis (H12) is that the Perceived Risk (PR) variable has a negative effect on digital loan customer loyalty at PT Bank XYZ. This is from Table 9 shown by the PR path coefficient value of -0.206, which states that each 1 unit increase in Perceived Usefulness will reduce digital loan customer loyalty by 0.206 units. The p-value is smaller than 5%, which is 0.041 <0.05, means that Perceived Risk has an influence on digital loan customer loyalty at PT Bank XYZ.
- The results of the study indicate the sixteenth hypothesis (H16), namely the Brand Image (BI) variable has a positive effect on digital loan customer loyalty at PT Bank XYZ. This is from Table 9 shown by the BI path coefficient value of 0.351, which states that each increase in Perceived Customer Experience by 1 unit will increase digital loan customer loyalty

by 0.351 units. The p-value is smaller than 5%, which is $0.024 < 0.05$, means that Brand Image has an influence on digital loan customer loyalty at PT Bank XYZ.

The results of this study also conclude that customer satisfaction has a very large influence on customer loyalty in using the PT Bank XYZ digital loan application. This is indicated by the Satisfaction Customer path coefficient value of 0.564 (the biggest compared to other variables) and the T-Statistic value of 3.462 (the biggest compared to other variables). Therefore, PT Bank XYZ credit must continue and improve the quality of its services in order to increase customer satisfaction and retain loyal customers.

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