Antecedents of Customer Loyalty: Study from Digital Transaction of E-Wallet Apps

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Abstract
The purpose of this study is to explore the effect of service quality and perceived utility on customer loyalty in the digital money business, with particular emphasis on the intervening function of consumer satisfaction. The research method is quantitative, employing survey methodology. The sample for this study was made up of e-wallet users who reside in DKI Jakarta and have made at least two online digital transactions with their e-wallet in the last six months. All variables were trustworthy, valid, and met the standards of the investigation. SPSS and Structural Equation Modeling were used to analyze the data (SEM). The data reveals that, first and foremost, service quality and perceived utility affect customer satisfaction positively. Second, customer satisfaction functions as a moderator between service quality, perceived utility, and client loyalty. Third, customer loyalty is linked to service quality and perceived value, but only in a small way. As a result of this finding, consumer satisfaction plays a critical role in fostering loyalty. The conclusion is that in the digital money business, superior quality and utility may impact clients positively but do not always result in loyalty. To accomplish this, digital currency players must place a premium on client pleasure.

Keywords— Customer Satisfaction; Perceived Usefulness, Service; Quality; Customer Loyalty

I. INTRODUCTION
The Internet has been generating consumer empowerment for over a decade (Pires et al., 2006). One of the advancements that we feel strongly about at this time is technology support. Data for 2020 shows that Indonesia ranks the third highest growth in the world after India and China with a total growth of 17% of the population accessing the internet, or the equivalent of 25.3 million accesses in a period of one year (wearesocial.com). The
rapid development of internet technology for community displacement creates various support functions that are easy to use, one of which is the payment function, which has now created non-cash payments via electronic money (Statista, 2018).

Electronic payments continue to grow to meet consumer needs and demands as well as the needs of payment systems in the e-commerce business. Therefore, electronic payments today have many functions, such as micropayments, electronic cash or digital money, smart cards, electronic checks, and e-wallets. Of course, it has different functions, features, and advantages (Mahribi, 2016). Indonesians currently use several electronic wallets, but based on data collected from Iprice, it can be concluded that the top three e-wallet holders with the most users in Indonesia in 2019 are Go-Pay, OVO, and DANA (Iprice.co.id, 2019). DANA, OVO, Gopay to LinkAja are electronic wallets that can be used for digital products such as credit cards, home shopping, e-Samsat, backups, bank transfers, PLN electricity, PDAM water, postpaid, telecommunications, Internet, cable TV, natural gas, games, providing payment services, digital certificates and other financial transactions (dana. id)

The primary problem with digital transactions is ensuring consumer satisfaction and loyalty. A service-oriented strategy is critical for survival in today's intensely competitive technological economy. The company must deliver an exceptional level of service to its consumers in order for them to return and remain loyal to the company (Gounaris et al., 2010). To maintain high levels of client satisfaction, it is vital to provide high-quality services, which often result in positive behavioral intentions (Brady & Robertson, 2001). Applications that incorporate high-quality systems, information, and electronic services are required for digital businesses to succeed (Sharma & Lijuan, 2015).

Numerous studies have been conducted on the subject of e-service quality. Customer satisfaction and repurchase proclivity are intricately connected to service quality attributes. Additionally, through an assessment of online buying experiences, Cao et al. (2009) evaluated the effect of service quality on online loyalty. They discovered that the quality of computer systems and electronic services has a significant impact on perceived value, particularly perceived utility, which significantly impacts web consumer loyalty. This is why the study was conducted.

This is corroborated by a study (Reddy & Sambaiah, 2019) that examines a variety of factors affecting e-wallet users' loyalty in India, including perceived value, ease of use, trust, perceived security, and self. Previously, Kumar et al. (2018) demonstrated that while branding can help increase security perceptions, trust and customer satisfaction have a significant influence on repurchase intentions. Wong et al. (2014) did the research. This shows that how easy and useful an electronic service is to use has a big impact on how long people stay loyal and satisfied with it. Additionally, it is vital to pay attention to the quality of services provided to clients, since this directly affects the customer's perception of the brand or organization. El-Adly and Eid (2016) say that service quality should be a marketing theme because it is linked to customer satisfaction, which is very important. Customer satisfaction will grow as a result of positive service perceptions. In other words, service satisfaction and service quality are related. Customer satisfaction is influenced by service quality. This is because it enables the company to exceed consumer expectations, thereby pleasing customers and convincing them to choose the company's services over competitors. With visible service quality or a high level of service quality and practicality, it is reasonable to believe that customers will be satisfied and prefer the company's product above that of competitors. This sense of satisfaction will influence consumer purchasing behavior in the future, fostering a sense of loyalty since consumers tend to repurchase the company's items.

The purpose of this study is to contribute to the body of knowledge by examining the effects of service quality and perceived utility on customer loyalty, with a focus on customer satisfaction as a moderating factor. Additionally, this study will evaluate the relationship between perceived worth and loyalty. A previous study indicated that customer perception has an indirect influence and that the effect is greater when satisfaction serves as a mediator (Pradiya et al., 2018). The other studies also state that product quality cannot directly affect loyalty (Rizan et al., 2020). While other studies say that quality is one of the factors that determine customer loyalty (Caluana, 2002). Therefore, this study will describe the differences between the two variables by examining the relationship between the mediating variables. The goals of this research are as follows: (1) to analyze the impact of service quality and perceived usefulness on satisfaction and loyalty and (2) to analyze the relationship and impact of satisfaction as an intervening variable.

This research is important to do to develop the quality of digital wallets in Indonesia so that ease of transactions can be achieved, one of which is by increasing customer trust and satisfaction to encourage their attractiveness in switching to digital products. The novelty of this study focuses on the effect of intervening variables on customer perceptions of using digital wallets or online transactions.
II. LITERATURE REVIEW

A. Service Quality

The quality of services (such as online purchasing in e-commerce) with Internet digital-related applications is frequently referred to as the quality of electronic services or the quality of electronic services. According to Wu (2014), “electronic service quality” refers to an Internet network service that is an extension of a website's ability to promote shopping, purchasing, and distribution operations successfully and efficiently.

To ensure client satisfaction and loyalty, the organization in this study must be able to provide high-quality service. Businesses must be able to see their clients' demands and tailor their sales to satisfy those wants. According to Kotler (2001, p. 175), the quality of a product (service or item) is its capacity to perform its functions, which include durability, reliability, strength, ease of use, and product maintenance, as well as other desirable attributes. Tjiptono (2004) defines service quality as the desired level of excellence and the strictest control essential to meet client expectations. Customers' expectations and how they have behaved are two of the most important things affecting customer service.

Customer satisfaction indicates that customers believe a service has the potential or power to provide positive sentiments or outcomes (Kuo et al., 2009). Earlier research has established a significant correlation between service quality and client satisfaction (Kuo et al., 2009; Gounaris et al., 2010; Rizan et al., 2019; Kresnamurti et al., 2020). An earlier study on conventional shopping indicates that service quality does affect customer satisfaction (Cronin & Taylor, 1992; Jumawan, 2018). However, the same study (Kuo et al., 2003; Lee & Lin, 2005; Park & Leec, 2011; Kho, 2005; Rizan et al., 2020) demonstrated this effect with research on websites and online shopping.

Loyalty is an old word that has been used for a long time to describe a person's loyalty to a country, a cause, or humanity. (Lovelock, 2016). Loyalty in a business environment describes the willingness of customers to continue patronizing the company for a long time (especially in exclusive situations) and recommending company products to friends and colleagues (Lovelock, 2016). Customer loyalty is not limited to buying behavior; it makes the company a priority, a favorite, and a future intention.

According to studies, service quality is a distinct criterion for evaluating a business's services. Customer loyalty to particular services results in repurchases that benefit the business. Additionally, research indicates that customer loyalty is determined by the consumer's perception of the service's quality (Chang et al., 2014; Kedah et al., 2015; Jeon & Jeong, 2017; Mihajlovic, 2017; Pee et al., 2018; Rizan et al., 2019; Rizan et al., 2020). It has been demonstrated that service quality has a significant impact on customer satisfaction and loyalty (Parasuraman et al., 1985). It was found by Caruana (2002) and Zeithaml (1988), both of whom looked at customer satisfaction as an intermediate or intervention variable, that customer loyalty was linked to satisfaction as an intermediate or intervention variable.

According to the service literature (Taylor & Baker, 1994), customer satisfaction is an intervening variable in the link between service quality and customer loyalty. Furthermore, research by Rizan et al. (2020) shows that customer satisfaction and customer loyalty play a big role in online business.

Online transactions, which include buying and selling electronically, are greatly affected by the smoothness of the application, the features provided, and the ease of payment. The completeness and convenience of the product can increase satisfaction and make customers return to buy the product or visit the site. (Rizan et al., 2020)

The result shows that online transactions Therefore, it is hypothesized that:

H1: Service quality affects Customer satisfaction.
H4: Service quality affects Customer loyalty.
H6: Service quality affects customer loyalty mediated by customer satisfaction

B. Perceived Usefulness

Perceived usefulness is the estimation of the amount of benefit that can be received (Selli et al., 2016; Trisnawati et al., 2019). Simultaneously, Revels et al (2014) state in Amin et al. (2014) that perceived practicality is a critical component of innovation use and is tied to the practical value of cellular technology offered to clients. Wang et al in Wida (2019), define perceived usefulness as the belief that adopting a certain system will improve
one's performance. Perceived usefulness refers to a customer's perception or belief about the benefits of utilizing a product or service to enhance their performance.

Service quality refers to one or more services provided to customers to meet customer needs, and it is expected that these services can meet or exceed expectations. Perceived usefulness is a customer's view or belief about the benefits of using this product or service to improve their performance.

According to Gloria and Achyar's (2016) research, when it comes to advertising mobile instant messaging, the perceived utility has a significant impact on user satisfaction. According to previous research conducted by Zhou and Lu (2011), perceived usefulness has a significant effect on customer satisfaction. Simultaneously, another study (Trisnawati et al., 2019) discovered that perceived usefulness was acceptable but had no effect on customer satisfaction among Grab users in Jambi. Gloria and Achyar (2016) revealed that perceived utility has a substantial effect on customer loyalty toward mobile instant message promotions. Zhou and Lu's (2011) studies corroborate this, demonstrating that perceived utility and customer loyalty are related. Previous research shows that when people don't think their products are worth as much as they used to, they start buying them from other corporate brands, which shows that they are less loyal to them. The usefulness of customer opinions has also been shown to improve customer loyalty (Muflihadi & Rubiyanti, 2016; Yogananda & Dirgantara 2017; Ashghar & Nurlatifah, 2020), as well as other research.

According to Parreira et al. (2016), electronic client loyalty is assumed to indicate website repurchase intents or revisiting behavior. It has been called customer loyalty, or online consumer loyalty, lately because it is a customer's commitment to a website, making transactions through the website, and recommending the website to other people (Suhartanto et al., 2019).

Reddy and Sambaiah's (2019) research, the relationship between security perceptions and customer loyalty is influenced by customer pleasure. Additionally, this study shows that by integrating customer satisfaction as a mediating or intervening component, the relationship between consumer-perceived usefulness and loyalty is better explained. In addition, multiple studies have shown that customer loyalty is indirectly affected by a company's perceived usefulness (Praditya et al., 2018; El-Adly & Idul Fitri, 2016; Rizan et al., 2020). The following hypotheses are proposed as a result of these findings:

H2: Perceived usefulness affects customer satisfaction
H5: Perceived usefulness affects customer loyalty
H7: Perceived usefulness affects customer loyalty mediated by customer satisfaction

C. Customer Satisfaction

Customer satisfaction is viewed as a predictor of loyalty, which is derived from earlier consumer interactions (Anderson & Srinivasan, 2003; Wu & Wang, 2005). Additionally, numerous studies have established that customer satisfaction plays a role in loyalty and that boosting customer satisfaction can result in increased customer loyalty (Srinivasan et al., 2002; Anderson & Srinivasan, 2003; Balbanis et al., 2006). Additionally, numerous research studies reveal a strong and clear link between customer satisfaction and loyalty (El-Adly & Eid, 2016; Rizan et al., 2014; Rizan et al., 2019; Rizan et al., 2020). Loyalty can be defined as consistent and long-lasting purchasing behavior that encourages firms to maintain a favorable attitude (Chang & Chen, 2009). Additionally, customer loyalty can be defined as a business's commitment to purchasing or disregarding a product or service that is certain to remain popular in the future. Various factors impact this behavior, including the website's influence and marketing efforts (Li, 2013). As a result, the following is hypothesized:

H3: Customer satisfaction affects customer loyalty

III. RESEARCH METHODOLOGY

A. Research Design
This study employs a quantitative methodology. This study aims to combine descriptive and causal approaches (Malhotra, 2010). The survey sampled digital wallet users who reside in Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi) and have completed at least two online transactions in the last six months.

B. Participants and Data Collection

The sample size was limited to 200 participants in order to minimize mistakes (Hair et al., 2011). The r-table values are 0.138 at a 5% significance level, and the reliability is more significant than 0.6. All variable statuses are valid and dependable if the prerequisites are met.

C. Instrument Development and Data Analysis

The Pearson Product Moment Correlation approach was used to establish validity, and the Cronbach Alpha technique was used to determine reliability, both of which were completed using SPSS 22. Meanwhile, the analysis was conducted using the SEM (Structural Equation Model) technique and the LISREL 8.8 program. This study surveyed 145 people.

This study uses Structural equation model analysis because this analysis can validate the variables in the study, which often results in unclear conclusions, thus requiring structural equation modeling that can be used to create variable indicators simultaneously.

Structural equation modeling can estimate measurement errors by explicitly incorporating a variable for measurement errors that match the observed variable's measurement errors. It can also be used to model and test complex interaction patterns, like many different hypotheses.

IV. RESULT/FINDING

A. Confirmatory Factor Analysis

The Pearson test can be used to verify the investigation's validity. Pearson coefficients are considered valid if they exceed the value specified in the r-table. The significance level for the r table in this study is 5%, and the sample size is 200. Additionally, the researchers determined the reliability of each variable using the Cronbach's Alpha test. Cronbach's alpha is deemed undesirable if it is less than 0.6, acceptable if it is 0.7, and good if it is 0.8. (Ghozali & Latan, 2012). Each indication has an r value greater than or equal to 0.318. As a result, each research metric is reliable. Each variable has a Cronbach's alpha value of more than 0.6 and more than 0.8, which means it is good.
Figure 2. Structural Equation Model Results

E-Service Quality. The service quality variable has 12 signs in the instrument test findings. Because their values are less than 0.5, four indicators are removed from the model after the first-order construct. Their Goodness of Fit Indices values don't meet the index value, so they are removed from the model.

Perceived Usefulness. Six indicators are included in the instrument test findings for the variable "perceived usefulness." After processing the model in the first-order construct, no indicators are discarded, and evaluating good fit indicators is considered to be successful because all assessments have marginal fit-to-fit values.

Customer Satisfaction. Customer satisfaction has five indicators in the instrument test findings. No indicators were discarded after the model was processed in the first-order build. All of the results appear to be genuine, as each indicator has a value greater than 0.5.

Customer Loyalty. The customer loyalty variable contains six signs in the instrument test findings. No indicators were discarded after the model was processed in the first-order build. All of the results appear to be genuine, as each indicator has a value greater than 0.5.

Table 1. First Order Construct

<table>
<thead>
<tr>
<th>Variable</th>
<th>Goodness of Fit Indices</th>
<th>Cut-off Value</th>
<th>Result</th>
<th>Model Of Evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Service Quality</td>
<td>Chi-Square &lt; 3</td>
<td>0.00</td>
<td>Perfect Fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CFI ≥ 0.90</td>
<td>0.97</td>
<td>Good Fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMSEA ≤ 0.08</td>
<td>0.08</td>
<td>Close Fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMSR &lt; 0.05</td>
<td>0.02</td>
<td>Good Fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TLI/NNFI ≥ 0.90</td>
<td>0.96</td>
<td>Good Fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI ≥ 0.90</td>
<td>0.89</td>
<td>Marginal Fit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI ≥ 0.90</td>
<td>0.94</td>
<td>Fit</td>
<td></td>
</tr>
<tr>
<td>Perceived</td>
<td>Chi Square &lt; 3</td>
<td>0.01</td>
<td>Perfect Fit</td>
<td></td>
</tr>
</tbody>
</table>
4.1. Test for Direct and Indirect Effects.

The results of the direct and indirect effects of the independent factors on the dependent variable are shown in Table 2. As can be shown, service quality (X1) has a direct effect on customer satisfaction (Y) of 0.32, whereas perceived usefulness (X2) has a direct effect on customer contentment of 0.59 (Y). Additionally, customer satisfaction (Y) has a direct effect on customer loyalty of 0.59 (Z).

Table 2. Summary of hypothesis testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variable</th>
<th>Standardized Total Effect</th>
<th>t-Values</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>CS</td>
<td>SQ</td>
<td>0,32</td>
<td>2,03</td>
</tr>
<tr>
<td>H2</td>
<td>CS</td>
<td>PU</td>
<td>0,59</td>
<td>2,84</td>
</tr>
<tr>
<td>H3</td>
<td>CL</td>
<td>CS</td>
<td>0,59</td>
<td>2,55</td>
</tr>
</tbody>
</table>
The effect of service quality (X1) on customer loyalty (Z) is 0.09 in the direct direction and 0.19 in the indirect direction, for a total effect of 0.09 on customer satisfaction is 0.28 (0.19 + 0.9). While perceived usefulness (X2) has a direct influence of 0.10 and an indirect effect of 0.34 on customer loyalty (Z), the total effect of perceived usefulness on customer loyalty is 0.44. The customer satisfaction variable in this study model also plays a role in explaining how much of an indirect effect there is. It acts as a link between service quality, perceived value, and customer loyalty (see Table 2).

V. DISCUSSION

The goal of this study was to evaluate customer loyalty in online money transactions and to develop new knowledge about the single most important factor affecting customer loyalty via satisfaction: customer loyalty. Additionally, the study attempted to expand existing knowledge about how service quality and perceived usefulness affect customer pleasure and loyalty in digital firms, particularly those that involve e-wallet transactions. Table 5 summarizes the results of this study's hypotheses testing. Rita et al. (2019) and Ningsing et al. (2019) suggested adapting the service quality instrument to other digital businesses in order to see if the quality variable worked the same way across different sectors and industries, including the cultural industry.

The study revealed a favorable correlation between service quality (website design, security/privacy, and fulfillment) and consumer satisfaction in the digital business market. As a result, a firm must pay increased attention to these elements and seek out innovations that will improve their performance and service quality. As demonstrated by the literature, there is a strong association between service quality and user satisfaction in digital transactions. Not only did service quality have an effect on client satisfaction in this study, but another instrument did as well. Perceived usefulness also had an impact on customer satisfaction, in which fulfillment of customer needs is the highest indicator was given an impact (El-Adly, 2019; Konuk, 2019).

Surprisingly, in the e-money transaction as a digital wallet industry, service quality did not significantly directly impact building customer loyalty. According to Wen and Fang (2014), customer service could be positive and significantly build loyalty through satisfaction. In the same way, the study showed that digital wallet users choose to be loyal just if they feel satisfied.

The same result was also found on the perceived usefulness of e-wallet customers. Wang and Prompanyo (2020) found that usefulness, especially about function for upgrading performance transaction activity, builds an un-significantly direct effect on customer loyalty instead of an effect through customer satisfaction. Contrarily, this study found that satisfaction truly helps to build loyalty in digital wallet users. Customer who is satisfied would positively and directly significantly impact their loyalty to e-products (Pereira, 2016). Customer satisfaction could also operate as a mediator for another variable, such as service quality or perceived utility, in order to increase customer loyalty.

Diverse digital business domains can provide a variety of outcomes depending on the characteristics and dimensions of e-service quality that contribute to client loyalty. Thus, the findings of this study were compared to those of a previous investigation that examined the same variable. Rizan et al., 2020 conducted an analysis of online transactions, specifically those involving e-commerce customers, and concluded that each company's service quality has a unique assessment aspect that determines the customer's decision to repurchase the goods. According to this study, service quality improves customer loyalty, specifically the fulfillment index. Perceived usefulness has a tremendous impact on a customer's loyalty from the customer's perspective (Wang et al., 2019). Customer evaluations of utility show that utility has a big impact on customer loyalty to mobile instant message ads (Gloria & Achyar, 2016). According to this study, individuals who believe their transactions would benefit them will be more loyal.
VI. CONCLUSION AND RECOMMENDATION

This study is a comprehensive examination of client loyalty in online commerce. This analysis is exploratory in nature and seeks to determine the effect of service quality and perceived customer value on transaction-based online digital wallets. In this model, Wang and Prompanyo (2020), Konuk (2019), and Rasheed (2014) use the four seven dimensions of service quality and three dimensions of perceived usefulness to figure out how each variable affects customer satisfaction, which in turn affects customer loyalty, which in turn affects customer satisfaction and loyalty.

This research develops service quality models that are more predictive of client loyalty than other frequently used scales. The findings are likely to contribute to the expansion of knowledge in several fields of digital transactions via e-wallet. The research shows that service quality and perceived usefulness are important for e-wallet users to become more loyal to their company, with customer satisfaction acting as a mediator.

On the other hand, service quality and perceived utility have no direct impact on customer loyalty. Customers are more likely to remain loyal when customer pleasure is a mediator between the two concepts of loyalty. According to previous research, the quality of a product and how people think about it affects customer loyalty through satisfaction.

The conclusion of the paper makes various practical and theoretical recommendations for future research and discusses the ramifications of company-related regulation. Several of these solutions place a premium on enhancing service quality through the elimination of errors. In addition, businesses that make digital transactions, like e-wallet businesses, need to focus more on exceeding customer expectations in order to keep customers.

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Relationship marketing, as proposed by Rizan et al. (2014), and product customization, as proposed by Chang and Chen (2008), should be incorporated into theories of customer loyalty in new research. We can better understand how the components interact and what the main effect is if we add another element.

REFERENCES


