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The Role of Service Quality in Increasing Customer Satisfaction and Loyalty: An Analysis of BNI Mobile Banking

Muhammad Taqi Ardabilli[1], Muinah Fadhilah[2], Ambar Lukitaningsih[3]
[1]Master of Management Study Program, Faculty of Economics, Universitas Sarjanawiyata Tamansiswa, Yogyakarta, muhammadtaqiardabili@gmail.com
[2]Master of Management Study Program, Faculty of Economics, Universitas Sarjanawiyata Tamansiswa, Yogyakarta
[3]Master of Management Study Program, Faculty of Economics, Universitas Sarjanawiyata Tamansiswa, Yogyakarta

Corresponding Author: muhammadtaqiardabili@gmail.com[1]

Abstract: The rapid evolution of digital business necessitates adaptation. This study examines how service quality influences customer satisfaction and loyalty among BNI Mobile Banking users. A quantitative approach was employed to analyze 125 active BNI Mobile Banking customers with at least 5 million rupiah in savings and under 60 years old from the BNI KCP Ampel branch. Path analysis using Smart PLS 4.0 software was conducted to determine the relationships between service quality dimensions (assurance, convenience, reliability, efficiency) and customer satisfaction and loyalty. Results indicate that assurance, convenience, and reliability positively impact satisfaction, which in turn positively affects loyalty. While satisfaction mediates the influence of assurance and reliability on loyalty, it does not mediate the effects of comfort, efficiency, and convenience on loyalty. Essentially, the study found that improving assurance, convenience, and reliability of BNI Mobile Banking can enhance customer satisfaction, leading to increased loyalty. However, comfort, efficiency, and convenience directly impact loyalty without being mediated by satisfaction.

Keyword: Efficiency, Assurance, Convenience, Ease, Reliability, Satisfaction, Service quality, Loyalty, Mobile Banking.

INTRODUCTION

There are many companies in the financial industry sector that have implemented electronic digital services in recent years. One of the pioneering companies and has the advantage in the financial sector is BNI (Bank Negara Indonesia). BNI is a state-owned bank that has advantages in terms of providing easy service, online transactions, 24-hour Customer Service, promos and various conveniences to encourage increased use of technology-based services, banks need to offer a variety of services. The best strategy is to provide superior customer service through electronic banking services (e-banking).

Bank Indonesia noted that until June 2023, PT Bank Negara Indonesia Tbk (Persero) continued to show positive developments in BNI Mobile Banking services. The number of users reached 14.03 million, growing 25% YoY (Year on Year), with total transactions increasing 9.8%, from 104,013,906 transactions in February 2022 to 114,214,069 transactions in February 2023. BNI noted that the transaction value of BNI Mobile Banking as of February 2023 reached IDR 155.51 trillion, rose 49% compared to the same period last year, which was IDR 104.48 trillion. (BNI, 2023).

Through its mobile banking application, BNI offers customers the convenience of conducting banking activities without the need for physical branch visits. In fact, some services can be accessed 24 hours a day, as long as the mobile device is connected to the internet network and/or SMS (Financial Services Authority, 2015). This not only provides convenience for customers, but also greatly helps BNI, which has many Branch Offices throughout Indonesia. Given the limited number of offices in each district or city, the presence of BNI mobile banking allows customers to perform various banking services without having to come to the BNI Office.

There are several models and theories that have been developed to analyze user attitudes and behavior towards technology adoption (Dhagarra et al., 2020). Among these models and theories, the Technology Acceptance Model (TAM) is one of the most widely explored and developed. This model has the ability to predict user intentions and provides greater justification and validity in examining the adoption and acceptance behavior of a technology (Vahdat et al., 2020).

In addition to the aspects in TAM, another aspect that is considered important and has a major influence in increasing customer satisfaction of mobile banking users is service quality (Sagib & Zapan, 2014). Service quality is an overall assessment of the service performed by customers (Sagib & Zapan, 2014). Seth et al. (2005) noted that the results and assessment of service quality are strongly influenced by the type of service arrangement, situation, time, and needs. In addition, customer expectations of a particular service may change along with factors such as the frequency of interaction with that service and the competitive environment (Sagib & Zapan, 2014). Grönroos (1984) identified three key aspects of service quality: technical, functional, and image. The SERVQUAL model, developed by Parasuraman et al.(1988), is a widely recognized method for measuring service quality.

This model assumes that before receiving services, customers already have expectations of the services they will receive. During the service delivery process, customers expect to get the best service from the provider in terms of tangibility, assurance, responsiveness, empathy and reliability. After the service is delivered, customers will compare the service results with their expectations and assess the service quality of the provider. If customers' expectations are met, they will feel satisfied and are likely to become loyal to the organization. However, if these expectations are not met, the customer will feel dissatisfied and may look for another service provider or stop using the company's services (Chiguvi, 2023).

Basically, some previous literature carries the concepts of TAM and SERVQUAL in an effort to increase customer satisfaction. From the TAM concept, one of the aspects that can increase customer satisfaction is convenience (Wilson et al. 2021, Hikaru et al. 2021). As for the servqual concept, there are four aspects that can increase satisfaction, namely reliability (Barusman, 2019), security assurance (Li et al. 2021), comfort (Khairunnisa et al. 2021) and efficiency (Khatoon et al. 2020).

However, there are several previous studies that produce contradictory findings from most of the literature, namely Mahsyar & Surapati (2020) who found that service quality including reliability, assurance and convenience had no effect on customer satisfaction. These findings emphasize that consumers have their own point of view in meeting purchase satisfaction. In the context of food, consumers are not too concerned about service but rather emphasize the quality of the cuisine or food itself. So that companies must also better

understand consumer conditions so that they can determine the most appropriate strategy in providing satisfaction to consumers (Mahsyar & Surapati, 2020).

Furthermore, findings by Belinado et al. (2021) also found that service quality has no effect on post-purchase consumer satisfaction with automotive products. Furthermore, Sutanto et al. (2021) also found that there is no effect of service quality on customer satisfaction. Meanwhile, Bungatang & Reynel (2021) analyzed several elements of service quality and found that there are several elements that have no effect on satisfaction, namely reliability, empathy and tangible.

A review of the literature reveals inconsistent findings regarding the relationship between service quality and customer satisfaction. While some studies have demonstrated a positive link (Wilson et al., 2021; Hikaru et al., 2021; Li et al., 2021; Khairunnisa et al., 2021), others have found no significant relationship (Mahsyar & Surapati, 2020; Belinado et al., 2021; Sutanto et al., 2021; Bungatang & Reynel, 2021). Conversely, there is stronger consensus on the positive impact of service quality on customer loyalty (Zhou et al., 2021; Omar et al., 2021; Su et al., 2021; Borishade et al., 2021). However, a notable research gap exists as some studies have also reported no significant relationship between service quality and customer loyalty (Afifah & Kurniawati, 2021; Njeru et al., 2019; Hariani & Sinambela, 2020). These inconsistencies highlight the need for further research to clarify the complex dynamics between service quality, customer satisfaction, and loyalty.

The inconsistencies found in previous research regarding the relationship between service quality and customer satisfaction highlight a gap in the existing knowledge. To address this, this study adopts a novel approach by examining the individual effects of different service quality dimensions on customer satisfaction and loyalty. Unlike many previous studies that treated service quality as a single construct, this research delves deeper by exploring the specific contributions of dimensions such as security, comfort, efficiency, convenience (Barusman, (2019); Li et al. (2021))., and reliability and responsiveness, as identified by Sagib & Zapan (2014). This study aims to provide a more nuanced understanding of how these dimensions influence customer satisfaction and loyalty at BNI KK Ampel.

Relationship between Guarantee and Satisfaction

According to Sagib & Zapan (2014), assurance refers to customers' perceptions of confidence and trust in mobile banking services, while security refers to the extent to which the service is able to protect customers' important information or data. The use of mobile banking provides great facilities for consumers, making life easier. E-commerce is expected to continue growing in the future to meet the growing consumer demand.

Service providers need to ensure their products are easily accessible through applications and features that keep up with business developments (Filieri et al., 2021). This development is reflected in the smaller size of mobile phones that can still work faster and more efficiently, with greater application storage capacity (Rohajawati et al., 2022).

According to Zeithaml (1988), trust in security guarantees is the second important dimension of service quality. Wilson et al. (2021) also found that the presence of security in a technology-based service will foster satisfaction in consumers. Likewise with Barusman et al. (2019) emphasize that security in technology-based services is a top priority because if security is not obtained by customers or consumers, loyalty and satisfaction will be lost. However, different findings by Mahsyar & Surapati (2020) found that service quality including reliability, assurance and convenience had no effect on customer satisfaction. These findings emphasize that consumers have their own point of view in meeting their satisfaction. In the context of food, consumers are not too concerned about service but rather emphasize the quality of the cuisine or food itself. So that companies must also better understand

consumer conditions so that they can determine the most appropriate strategy in providing satisfaction to consumers. The first hypothesis that will be proven in this study is:

$H1_a$: The dimensions of assurance and security have a positive effect on satisfaction.

Relationship between Convenience and Satisfaction

Service convenience refers to how customers perceive the time and effort required to buy and use a service (Shankar & Rishi, 2020). It's seen as a way to enhance customer value by minimizing their time and effort. This concept is multifaceted and depends on the specific steps involved in purchasing and using the product or service (Berry et al., 2002).

Kumar et al. (2020) identified five key aspects of service convenience that impact customer satisfaction throughout the buying process: decision-making ease, accessibility, smooth transactions, the benefits derived from convenience, and post-purchase convenience. Previous research also emphasizes the importance of security for consumers, especially in services (Shankar & Rishi, 2020). Cha & Lee (2020) found that with good convenience, customer satisfaction will increase. Likewise with Sari et al. (2023) explain that in online services, customer convenience is a top priority and a determinant in growing customer satisfaction. However, different findings were found by Belinado et al. (2021) and Sutantto et al. (2021) that service quality where convenience is one of the aspects in it has no effect on customer satisfaction. From the explanation above, the second hypothesis that will be proven in this study is:

$H1_b$: The convenience dimension of BNI mobile banking services has a positive effect on customer satisfaction at BNI Ampel Cash Office.

Relationship between Efficiency and Satisfaction

According to Sagib & Zapan (2014), efficiency in the context of mobile banking services refers to ease of use and minimal effort required to access the service. Yaya (2012), in his research using the E-S-QUAL scale, found that the efficiency dimension is the most crucial factor in achieving customer satisfaction, based on Spanish customers' perceptions of online banking services. With online banking services, including mobile banking, customers can easily perform transactions anywhere and anytime without the need to visit a branch office or ATM machine, which significantly shortens their time.

Ahn et al. (2022) emphasized that with good efficiency, a company's online services will be able to provide satisfaction to consumers. Feng et al. (2020) describe that there is a correlation between the principles in efficiency and the principles in customer satisfaction. So that if efficiency is fulfilled, customer satisfaction will be achieved. Furthermore, Ali et al. (2021) emphasizes that efficiency in online services is part of service quality that can increase customer satisfaction. From the explanation above, the third hypothesis that will be proven in this study is:

$H1_c$: The efficiency dimension in BNI mobile banking services has a positive effect on BNI KK Ampel customer satisfaction.

Relationship between Convenience and Satisfaction

According to Pratiwi (2019), operating mobile banking can be defined as the effort required to use technology in terms of its appearance. Sangar & Rastari (2015) stated that the ease of using mobile banking can be created through several factors, such as visibility, design, navigation, and compatibility. They also identified several challenges in using mobile banking, including mobile frameworks, connectivity, display size, resolution differences, and limitations in the process and input methods (Sangar & Rastari, 2015).

Several previous studies have also proven the effect of ease of use on customer satisfaction (Wilson et al. 2021), Filieri et al. 2021). Wilson et al. (2021) found that if the ease of use of technology is high, it will increase user satisfaction. Likewise with Filieri et al.

(2021) emphasize that convenience is the most dominant attraction in a technology, the easier it is to use, the higher the user satisfaction. However, different findings by Dash (2022) state that convenience has no effect on customer satisfaction. So that in certain cases convenience does not have a significant impact on satisfaction. From the explanation above, the fourth hypothesis that will be proven in this study is:

$H1_d$: The dimension of ease of operation on BNI mobile banking services has a positive effect on BNI KK Ampel customer satisfaction.

Relationship between Reliability and Satisfaction

According to Shukri et al. (2020), reliability in the context of mobile banking services is the trust in the service provider's ability to deliver services well, including fulfilling promised commitments and claims. Reliability is also an important dimension in the RATER model, where it refers to the bank's ability to deliver services consistently and on time. This understanding is reinforced by Kobiruzzaman (2021) in Chiguvi (2023), which states that reliability includes the provision of timely and reliable services in the context of banking services.

According to Shukri et al. (2020), responsiveness in the context of mobile banking services is the ability of service providers to support customers and provide timely responses. This requires service providers to provide efficient and effective programs. As found by Chiguvi (2023), responsiveness includes the willingness to support customers and provide services quickly. This means that service providers must be able to provide a quick response in handling problems or providing information when needed by customers.

According to Jun & Palacios (2016), reliability and responsiveness are two key factors in determining the quality of online banking services, including in the context of mobile banking, which significantly affect the satisfaction of users of these services. Research by Ayo et al. (2016) also found that reliability and responsiveness are dimensions that significantly affect the quality of bank e-service. However, different findings by Bungatang & Reynel (2021) analyzed several elements of service quality and found that there were several elements that had no effect on satisfaction, namely reliability, empathy and tangibility. The fifth hypothesis to be proven in this study is:

$H1_e$: The dimensions of reliability and responsiveness in BNI mobile banking services have a positive effect on BNI KK Ampel customer satisfaction.

Relationship between Satisfaction and Loyalty

Customer satisfaction is the extent to which the performance of a product or service matches the expectations held by the customer. When performance does not meet expectations, this can lead to disappointment and dissatisfaction for customers (Veronika Trivia Lestari & Jeanne Ellyawati, 2019). Conversely, if the product or service performs according to expectations, customers will feel satisfied and happy with their experience.

Several studies have consistently demonstrated a strong positive relationship between customer satisfaction and loyalty. Ariff et al. (2013) and Thakur (2014) found that customer satisfaction significantly influences customer loyalty in the context of mobile banking. These findings align with the broader research conducted by Sagib & Zapan (2014).

On the other hand, different research results were found by Shin & Yu (2020) who stated in their research that customer satisfaction has no effect on customer loyalty. Likewise with Herawaty et al. (2022) who found that loyalty is not influenced by customer satisfaction. So that not always satisfied consumers will be loyal to a product and in the case of mobile banking further analysis must be carried out. Based on the explanation above, the hypotheses that can be developed in this study are:

H2 : Customer satisfaction with BNI mobile banking services has a positive effect on BNI KK Ampel customer loyalty.

METHOD

This research is quantitative research. Research with this quantitative method is done by collecting data derived from variables derived from existing theories. The population in this study were BNI KCP Ampel customers totaling 17,005. Sampling was done by purposive sampling using several criteria, namely:

a. Active Mobile Banking Users
b. Minimum savings of 5 million
c. Age under 60 years old

The criteria are in compliance with the research goals, namely analyzing the use of BNI mobile banking. From the total population taken data from the BNI KCP Ampel office and then selected based on the specified criteria, the remaining number of customers is 125 customers who use mobile banking actively, have savings of at least 5 million rupiah and are under 60 years of age. This study analyzed all customers who fit the research criteria, namely 125 BNI customers.

This study relied on primary data collected directly from respondents through online and offline questionnaires. Data analysis was performed using path analysis with Smart PLS 4.0 software. This method was chosen for its versatility in handling different types of data and its relatively few assumptions (Ghozali, 2014).

RESULTS AND DISCUSSION

Outer Model Analysis

1) Convergent Validity

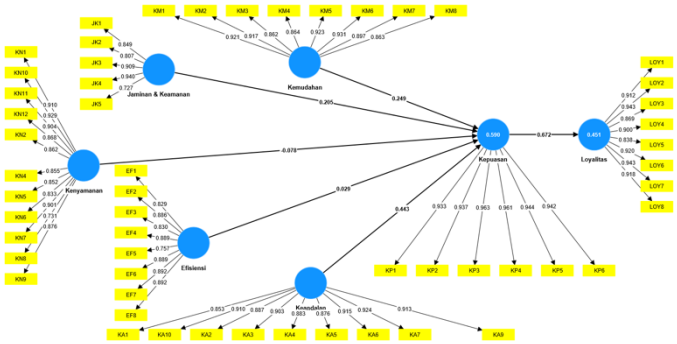


Figure 1. Outer Model Output

As shown in Figure 1, it shows the loading factor value that meets the convergent valdity standard. So that this research model can be declared convergently valid.

2) Construct Validity

Table 1. Average Variance Extracted (AVE)

	Average variance extracted (AVE)
Efficiency	0.738
Assurance & Safety	0.722
Reliability	0.803
Ease	0.806
Convenience	0.752
Satisfaction	0.897
Loyalty	0.821

Source: Research data

As in Table 1, the results indicate that all variables in the study have strong construct validity, as confirmed by their AVE values exceeding the 0.5 threshold.

3) Discriminant Validity

Discriminant validity ensures that each measure is distinct from others. This means that items related to one concept should be more strongly linked to that concept than to other concepts. By analyzing the data, we found that our measures effectively differentiate between the concepts, confirming good discriminant validity.

4) Composite Reliability

Table 2. Composite Reliability dan Cronbach's alpha

	Cronbach's alpha	Composite reliability (rho_a)
Efficiency	0.949	0.957
Assurance & Safety	0.901	0.909
Reliability	0.969	0.971
Ease	0.965	0.968
Convenience	0.967	0.968
Satisfaction	0.977	0.977
Loyalty	0.969	0.970

Source: Results of data processing with PLS

In Table 2, all constructs in the study demonstrated high reliability, with Cronbach's alpha values above 0.6 and composite reliability values exceeding 0.7. This confirms the internal consistency of the measurement instruments.

Analysis Inner Model

1) Coefficient of Determination

Table 3. R2 Value of Endogenous Variables in the Inner Model

Endogenous Variable	Nilai R^2
Satisfaction	0,590
Loyalty	0,451

Source: Primary Data Processed, 2024

Table 3 reveal that 59% of the variation in customer satisfaction is explained by the variables included in this study, while the remaining 41% is due to factors not considered here. Similarly, 45.1% of the variation in customer loyalty is accounted for by the studied variables, with the remaining 54.9% attributed to other factors.

2) Hypothesis Testing

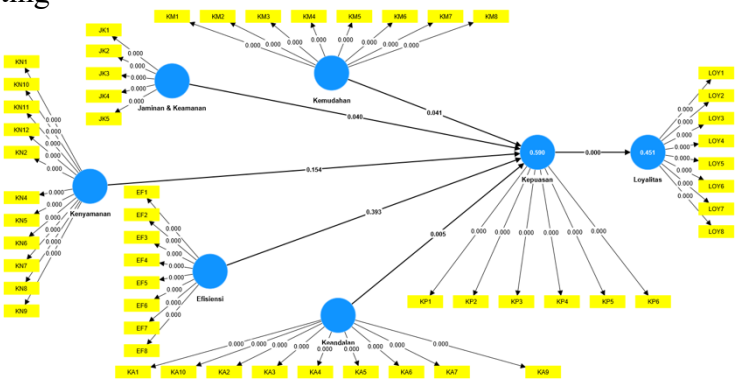


Figure 2. Hypothesis Testing Results

This study uses a one-tailed test with a significance level of 5%. To be considered significant, a result must have a t-statistic greater than 1.64 and a p-value less than 0.05. The

parameter coefficient indicates both the direction (positive or negative) and strength of the relationship between variables.

Table 4. Path Analysis

	Original sample (O)	T statistics (|O/STDEV|)	P Values
Assurance & Security -> Satisfaction	0.205	1.748	0.040
Convenience -> Satisfaction	0.078	1.020	0.154
Efficiency -> Satisfaction	0.029	0.271	0.393
Convenience -> Satisfaction	0.249	1.737	0.041
Reliability -> Satisfaction	0.443	2.599	0.005
Satisfaction -> Loyalty	0.672	8.797	0.000
Assurance & Security -> Satisfaction -> Loyalty	0.138	1.674	0.047
Convenience -> Satisfaction -> Loyalty	0.052	0.989	0.161
Efficiency -> Satisfaction -> Loyalty	0.020	0.262	0.397
Convenience -> Satisfaction -> Loyalty	0.167	1.574	0.058
Reliability -> Satisfaction -> Loyalty	0.298	2.637	0.004

Source: Results of data processing with PLS

Findings indicate that a strong guarantee and security feature positively impacts customer satisfaction (p-value = 0.040), supporting hypothesis H1a. While convenience did not significantly influence satisfaction (p-value = 0.154), contrary to H1b, and efficiency also showed no significant effect (p-value = 0.393), contradicting H1c. However, convenience was found to positively correlate with satisfaction (p-value = 0.041), supporting H1d. Reliability also significantly contributed to higher satisfaction levels (p-value = 0.005), confirming H1e. Importantly, customer satisfaction was a strong predictor of loyalty (p-value = 0.000), supporting hypothesis H2.

Furthermore, the amount of influence of each variable is shown in the path coeffiient value or original sample research. Study results prove the aspect of service quality that exerts the greatest impact on customer satisfaction is dependability, with a significant value of 0.443. Furthermore, convenience has an influence on satisfaction of 0.249 and assurance & security has an effect on satisfaction of 0.205. Further results related to indirect effects show that satisfaction is able to mediate the effect of assurance & security and reliability on customer loyalty. Although satisfaction does not have the ability to mediate the impact of comfort, ease, and efficiency over customer loyalty.

Discussion

The Effect of Security and Assurance Dimensions on Satisfaction

The findings in this study state that assurance and security possess a beneficial and profound impact on BNI Mobile Banking customer satisfaction. Based on these outcomes, H1a has been confirmed, so it is empirically proven that if mobile banking services are able to provide guarantees in fund storage, data storage, smooth fund transfer processes and security in transactions, as a result mobile banking service satisfaction among customers might rise. Given these findings, this study advises increasing guarantees and security in mobile banking services to optimize customer satisfaction.

Other research agrees with what this study found, namely Li et al. (2021), Khairunnisa et al. (2021), Larasati et al. (2024) which also discovered the impact of assurance and security on customer satisfaction. However, there are several previous studies that have produced contradictory findings from most of the literature, namely Mahsyar & Surapati (2020) who discovered that how good the service is, including things like being dependable, trustworthy, and easy to use had no effect on customer satisfaction. These findings emphasize that consumers have their own point of view in meeting purchase satisfaction. Furthermore, Larasati et al. (2024) also emphasized that service quality, especially security guarantees, is an important factor in fostering consumer loyalty.

Based on the extent to which mobile banking services give users confidence that their transactions and personal information will be well protected. This includes safety steps like encrypting data, two-factor login, and keeping people from getting in without permission. These include fraud protection, the use of the latest security technology, and the implementation of policies and best practices in protecting customers' personal information.

Satisfaction can be reflected in various aspects, including pleasant user experience, confidence in the security of the service, and ease of use. This means that there is a favorable or increasing relationship between the assurance and security dimensions in mobile banking services and the level of user satisfaction. To put it another way, users are more likely to be happy and comfortable with a service if they feel a sense of confidence and security. Thus, the statement implies that the use of mobile banking services that offer high levels of assurance and security will tend to increase user satisfaction. This is because users' trust and sense of security in the service will increase, which in turn will affect their positive perceptions of the service and the banking institution that provides it.

The results of respondents' responses show that all measurement items on the guarantee and security variable have very good respondent answers. This means that from the respondent's point of view, BNI has a guaranteed and safe performance system. The item with the highest measurement assessment is JK2, which is about customer trust in BNI BANK. So that the results show that respondents have good trust, especially regarding M-Banking. The lowest assessment of respondents is JK5 which is the smoothness when transacting with a value of 4.34 so that the smoothness when transacting at M-Banking BNI needs to be improved.

The Effect of Comfort Dimensions on Satisfaction

The examination of the data in the current investigation shows that convenience of use does not have considerable impact on how satisfied mobile banking users are. Given these data, H1b is not justified. These results show different findings from the findings by Shankar & Rishi, (2020, Li et al. 2021), Khairunnisa et al. 2021), who found that customer satisfaction in using m-banking can be increased through convenience in use and transactions using m-banking. The findings of this study have different results where convenience does not necessarily increase satisfaction with Mobile Banking. Therefore, convenience must be accompanied by other factors in order to build satisfaction, including assurance and security.

Nevertheless, this study supports and has similar results to research by Belinado et al. (2021) also Sutantto et al. (2021) that service quality where convenience is one of the aspects in it has no effect on customer satisfaction.

Based on how easy users found it to use BNI mobile banking services at BNI KK Ampel. This part of convenience includes how easy the app is to use, whether it has the features one's desire, how responsive the system is, and the general user experience. The data show that there is a link between the perceived level of convenience and customer happiness (Hasibuan & Dirbawanto, 2024). The higher the level of perceived convenience, the more likely it is that the customer will be satisfied. The bad effect does not have a statistically significant effect, though. In other words, there is a chance that less ease will make people a little less satisfied, but the difference fails to be sufficient to say for sure.

Furthermore, the fact that the convenience dimension has no effect on customer satisfaction is not strong enough or statistically consistent. In this context, other factors such as service quality, system reliability, or how quickly and smoothly transactions are processed might have a stronger impact on how happy customers are. The absence of the influence of convenience on customer satisfaction indicates that other factors may be more important in determining customer satisfaction at BNI KK Ampel, and need to be considered in an effort to improve service quality and overall customer satisfaction.

Further, respondents' responses show that the majority of support items show very good respondent response scores. However, there is 1 indicator with a good assessment, namely KN3. The measurement items with the highest scores are KN4 and KN10. These results indicate that BNI Ampel Branch has good distance flexibility and has communicative services. As for the lowest value is KN3, namely the informative indicator with an assessment of 3.18. Thus, it is expected that it would be able to enhance m-banking platform and educational tools going forward.

Effect of Efficiency Dimension on Satisfaction

The analysis results show that the efficiency dimension in BNI mobile banking services has negligible impact on BNI KK Ampel customer satisfaction. Based on such information, H1c is not backed when making things more efficient fails to have a major impact on the way satisfied customers are. The outcomes go against some earlier research by Ahn et al. (2022; Feng et al. 2020; Ali et al. 2021) where Feng et al. (2020) who make the case that satisfying customers is directly related to operating efficiently. In order to attain customer satisfaction, efficacy must be met. Furthermore, Ali et al. (2021) emphasizes that efficiency in online services is part of service quality that are able to raise client satisfaction.

These results relate to the operational and functional efficiency of BNI mobile banking services. Efficiency covers a range of factors, such as how quickly transactions are processed, how promptly user inquiries are addressed, how easy it is to navigate the application, and how few service disruptions occur. The assessment relies on the level of customer satisfaction with BNI KK Ampel's mobile banking service. This satisfaction is evident in various aspects, including the ease of use, the speed of service, the range of features, and the overall quality of service.

Even though efficiency is the primary reason why more people are using mobile banking (m-banking), there are several reasons why efficiency alone is not enough to significantly drive the adoption of this service. First is the lack of digital literacy, Users who are less tech-savvy or not used to using digital applications may find it difficult to adapt to m-banking, even though the application is efficient (Nugroho & Nasionalita, 2020). Next is user preference where some users are still more comfortable with traditional ways of conducting banking transactions, such as visiting bank branches or using ATMs (Ardoni, 2022).

The results of respondents' responses show that all measurement items on the efficiency variable have very good responses with a range of 4.2 - 5. Furthermore, the highest respondent assessment obtained on the efficiency variable is EF2 which shows that using Mobile Banking at BNI bank is very easy. The measurement items with the lowest scores are EF3 regarding the simplicity of the process and EF5 regarding the efford that is not too heavy in using m-banking. So these results indicate that it is necessary to further develop the simplicity and simplification of the process when using BNI M Banking.

The Effect of the Ease Dimension on Satisfaction

The discoveries of this study confirm that convenience of use has a major beneficial effect on consumer satisfaction. These results provide confirmation that H1d is supported, where it is proven that if the use of m-banking is easier, the customer will be more satisfied with the application and with the Bank's services. Findings from this research are backed up by Wilson et al. (2021; Filieri et al. 2021) which further illustrates the extent of consumer happiness is undermined by convenience.

In research conducted by Thakur (2014), highlights how easy it is to use mobile banking has a noticeable, beneficial impact on consumer satisfaction and an indirect, positive effect on customer loyalty. Wilson et al. (2021) found that if the ease of using technology is high, it will increase user satisfaction. Likewise with Filieri et al. (2021) emphasize that the main draw of technology is its ease of use; the simpler it is, the happier its users are with it.

This refers to how easily users can operate BNI mobile banking services. Factors included in this dimension may include clarity of use instructions, simplicity of user interface, intuitive navigation, and system speed and reliability. This result is a platform or application provided by Bank Negara Indonesia (BNI) that allows users to do different financial activities using their smartphones or other mobile devices. These services include fund transfers, bill payments, credit purchases, balance inquiries, and other features.

Based on the level of satisfaction felt by BNI KK Ampel customers with BNI mobile banking services. This satisfaction can be reflected in positive perceptions of user experience, trust in services, and fulfillment of customer banking needs. This entails that there is a positive or strengthening relation among the level of client satisfaction with BNI KK Ampel services and how easy they are to use. This means that the easier it is for customers to operate BNI mobile banking services, the more likely they are to be satisfied with the service. In essence, the phrase suggests that the ease of using BNI mobile banking services has a huge, favorable impact on how happy BNI KK Ampel customers are.

The results of respondents' responses show that all measurement items received an assessment score of> 4.2 which indicates a very good value. Among the several good measurement items, the highest value is shown in measurement item KM2 regarding convenience and KM8 regarding speed. These results indicate that the BNI M-Banking application is easy for users to understand in making transactions and other features in M-Banking. Nonetheless, BNI M Banking is considered by respondents to be able to make transactions quickly.

The Effect of Reliability Dimensions on Satisfaction

The investigation finds that the dependability of mobile banking can have a beneficial and substantial effect on consumer satisfaction while using m-banking. The outcomes imply that there is support for H1c, indicating that as the reliability of mobile banking features and services improves, consumer happiness also grows. The evidence corroborates Khattab et al. (2019), Zusmawati & Rahmi (2022) that customer satisfaction can be significantly improved through m-banking reliability. However, different findings by Bungatang & Reynel (2021) who analyzed several elements of service quality and found that there are several elements that have no effect on satisfaction, namely reliability, empathy and tangibility.

Reliability means the confidence in the company's capacity to execute services effectively, such as delivering commitments and claims (Shukri et al., 2020). According to Tjiptono & Chandra (2017), customer satisfaction is created because of good service quality, related to competence, responsiveness, assurance, empathy, and tangible practices. This refers to how reliable and stable BNI mobile banking services are in carrying out their functions. Factors included in this dimension include uninterrupted service availability, transaction speed, and accuracy of data presented to users. Based on how responsive BNI mobile banking services are to customer needs and requests. This includes the speed in responding to user problems or complaints, the availability of customer service, and the ability to provide assistance or support effectively.

Bank Negara Indonesia (BNI) has created a platform or application to let consumers use their mobile devices to handle different banking activities. Along with other services, this one covers cash transfers, bill payments, credit purchases, balance checks. According to Khatab et al. (2019), customer satisfaction is significantly raised by the benchmark for service quality—responsive behavior. In this sense, the coefficient is positive, so the responsiveness / customer happiness has a positive connection; the more the responsiveness, the higher the customer satisfaction (Zusmawati & Rahmi, 2022).

The findings of the replies from the respondents indicate that all of the measuring items have a very excellent evaluation, particularly item KA4, which demonstrates the comprehensiveness of the features and informational services. On the other hand, there is one

item that gets a good rating and is lower than other items, namely KA8 regarding communication, which shows that it is necessary to increase the responsiveness and responsiveness of the Bank when there are problems from consumers.

The Effect of Satisfaction on Loyalty

On the basis of the findings of additional research, it was discovered that customer satisfaction has a beneficial and considerable impact on customer loyalty. Based on these findings, it has been demonstrated that the level of customer satisfaction is directly proportional to the level of loyalty to financial products, including mobile banking. These findings confirm that H2 is supported and in line with several previous studies by Heidy et al. (2022), Garzaro et al. (2021), Fadhilah et al. (2022). Garzaro et al. (2021) emphasized that banks providing mobile banking should strive for customer satisfaction because satisfaction can foster customer loyalty. On the other hand, different research results were found by Shin & Yu (2020), they mentioned in their examination that there is no correlation between consumer satisfaction and customer loyalty for customers. Fadhilah et al. (2022) emphasizes that with consumer satisfaction, the intensity of consumer use and purchases will increase. Likewise with Meliana et al. (2023) which proves empirically that customers are more likely to remain loyal to the brands and goods that are supplied if they are happy with those brands and items.

According to the degree of satisfaction that BNI clients have with the mobile banking services that the bank offers, the bank has received positive feedback. There are several aspects that fall under this category, including the convenience of use, the availability of functionality, the dependability of the system, and the responsiveness of customer support. This refers to the platform or application that is made available by Bank Negara Indonesia (BNI) to its clients in order to afford them the opportunity to carry out a variety of banking transactions using their mobile devices. The following are some of the functions that are included in these services: fund transfers, bill payments, credit purchases, and balance inquiries.

This result shows that the level of customer loyalty or attachment to Bank BNI KK Ampel. The frequency of service usage, customer retention, referrals to others, and preferences for utilizing BNI products or services in the future are all indicators that may be used to determine the level of client loyalty. As a result, there exists a positive correlation regarding how happy customers are with BNI's mobile banking services and how loyal they are to BNI KK Ampel. Because of this, customers are more likely to stay loyal to BNI KK Ampel and use their services if they are happy with their mobile banking services. In another way, this sentence suggests that how happy customers are with BNI's mobile banking services has an immense impact on how loyal customers are.

The results of respondents' responses show that all measurement items get an assessment score of> 4.2 which indicates a very good value. This means that research respondents have felt satisfaction with the services, transactions and products of BNI M Banking. Among the several good measurement items, the highest value is shown in the KP3 measurement item. These results indicate that respondents are satisfied in making transactions through M Banking BNI.

CONCLUSION

The study found that assurance and security, as well as convenience, significantly impact customer satisfaction with BNI mobile banking. While reliability also showed a positive influence, its effect was not statistically significant. Importantly, customer satisfaction was a strong predictor of loyalty. To enhance the service, BNI should prioritize improving security, convenience, and reliability. Additionally, the bank should focus on increasing customer satisfaction by tailoring features to customer needs. By doing so, BNI

can effectively strengthen customer loyalty and stay ahead of the competition in the market for mobile banking.

For future research, several things are suggested. First, the study can expand the scope by taking a larger sample or involving a wider geographical variation. This can help validate the existing findings and provide a more holistic insight into the factors that influence customer satisfaction and loyalty to mobile banking services. Second, given that the efficiency and convenience variables are not significant in their relationship with customer satisfaction, future research can investigate the causes and possibly deepen the measurement or approach to these variables to better understand their impact. Third, it is hoped that further research will add intervening variables or mediating variables in analyzing the effect of service quality dimensions on satisfaction and loyalty as a solution to several dimensions that have no effect in this research model.

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