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The Influence of Service Innovation and Service Quality on Customer Satisfaction Users of Mobile Banking Livin' by Mandiri

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ABSTRACT

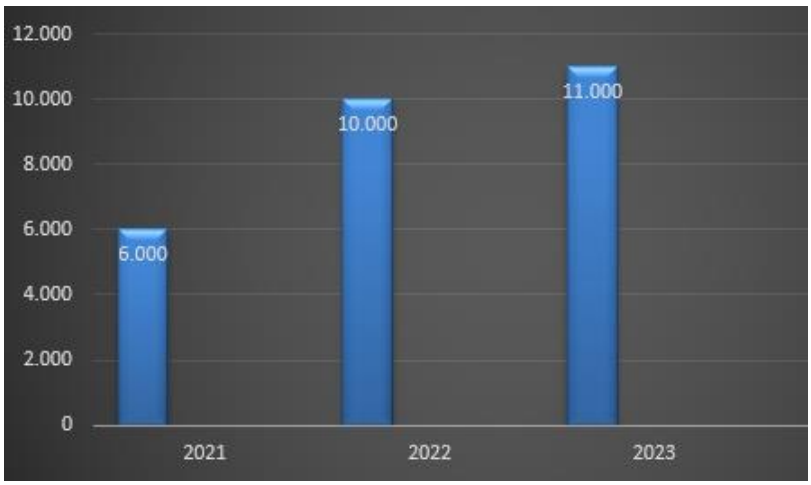
This research was conducted with the aim of determining the influence and analyzing service innovation and service quality on customer satisfaction among Livin' by Mandiri mobile banking users. Using a quantitative approach with a survey method using SPSS version 27 tools. Primary data is used as a data source in form of a questionnaire from respondent responses with sampling using purposive sampling using the Slovin formula, then a sample of 99 respondents was obtained. The result show that simultaneously service innovation and service quality have a positive and significant effect on customer satisfaction for Livin' by Mandiri. It is hoped PT Bank Mandiri will always develop service innovation and service quality that is easier, faster, more accurate and comfortable by following technological developments so that it has an impact on increasing customer satisfaction.

INTRODUCTION

Technological change has developed very rapidly since the beginning of human history and can affect all areas of life (Caliskan, 2015). Industry 4.0, is characterised by a highly developed manufacturing sector that makes use of integrated, high-tech solutions to address human resource demands (Javaid et al., 2020). New strategies, markets, and industries can be created in response to the technological challenges posed by Industry 4.0. New digital-based firms also emerged as a result of this shift.(Castagnoli et al., 2022). Technological advances emerged with the internet, the existence of the internet is growing rapidly, has the most complete information sources, and cannot be separated from community activities (Budiatmaja & Dully, 2024).

The internet is increasingly being used via smartphones which are easy to carry anywhere and anytime (Ifeanyi & Chukwuere, 2018). The benefits of the convenience of the internet are that it makes it easier to exchange information with other people even though they are far away, educational facilities, entertainment in the form of videos or

images, can save costs and time. Everyday tasks, information gathering, communication, and creativity have all been greatly enhanced by the widespread use of the internet and other digital technologies (Akerman et al., 2015). Knowledge internet technology has given rise to the latest innovations that only utilize digital platforms. Innovation comes from the Latin word “innovare” which means creating new and is considered the ability to transform new ideas and make them widely available. Innovation is also driven by technology (Dong-Il Shin, 2017). The technology-based innovation perspective can be conceptualized as technology that develops to support the digitalization of non-technology businesses, one of which is banking companies. Banking includes everything related to financial activities, the function and role of banks is very important, namely for the country's economy, people use bank services to collect or borrow funds for investment (Nurhana et al., 2024). An aspect of the development of the banking world is the many service innovations offered based on modern technology (Kitsios et al., 2021). Technology services are part of the service revolution (Kowalkowski et al., 2023). Companies in Indonesia are able to innovate with the goal of competing between countries, as evidenced by their ranking 85th out of 131 in the Global Innovation Index (GII) in 2020 and 14th out of 17 in Southeast Asia, East Asia, and Oceania (Agustia et al., 2022). PT Bank Mandiri is ranked number 1 which has the largest assets in Indonesia with a value of IDR 1.992 trillion (Binekasri, 2023). In 2021 PT Bank Mandiri remains committed to building long-tern relationships based on trust with both business and individual customers. PT Bank Mandiri is one of the largest State-Owned Enterprise (BUMN) banks in Indonesia as assessed by customer trust and service to customers. PT Bank Mandiri innovated technology-based services by launching a new service mobile banking Livin’ by Mandiri. Banking operations fully follow current developments. Maintain a leading position in technology-based service innovation to improve technology and offer superior customer service (Ahmed, 2023). Livin' by Mandiri provides easy access for customers in carrying out financial transactions. The mobile banking application provides payments via transfer, checking balances at any time allowing customers to carry out independent transactions, because banking services are always open (Ahmed and Sur, 2021). Livin' by Mandiri this time produces an application that is different from the previous one, namely Mandiri Online and is more relevant to meet banking needs in 2021. PT Bank Mandiri continues to develop new features that continue to be found in the Livin' by Mandiri application, therefore a series of upgrades The Livin 2.0 application was available in early October 2021. Customers no longer come to the nearest branch, but are more based on a real-time concept, meaning customers can access it anytime and anywhere via the Livin' by Mandiri application. Facilities provided by Livin' by Mandiri to customers. The research used locations in Tambaksari District due to the large number of residents accessing mobile banking 11,000 users.



Source: PT. Bank Mandiri (Persero) Tbk, 2023

Figure 1. Livin' by Mandiri User Data in Tambaksari District

LITERATURE REVIEW

Tjiptono and Diana (in Seran et al., 2023) marketing is the process of creating, distributing, promoting, setting prices or services, the idea of facilitating satisfactory exchange relationships at customer prices, and building positive relationships with stakeholders in a positive environment. dynamic. According to another opinion from Suntoyo (in Aghniya et al., 2022) Interactions between businesses, customers, and other interested parties serve the marketing function, which is to meet consumer desires and requirements. Marketing, according to the provided definition, is "the process by which an individual or group seeks to meet the demand of consumers in order to generate profit for those consumers".

Marketing management is the activity of analyzing, planning, implementing and monitoring all activities or programs that will be received from buyers at favorable exchange rates in order to achieve organizational goals (Rahmawati and Hidayah, 2021). According to Manullang and Hutabarat (in Poluan and Karuntu, 2022) marketing management is process, analyze, create and carry out marketing activities involving products or services, with the aim of creating customer satisfaction. Ultimately, marketing management boils down to a collection of rules for selecting target consumers, evaluating customer needs, meeting customer satisfaction, and creating profits for the company.

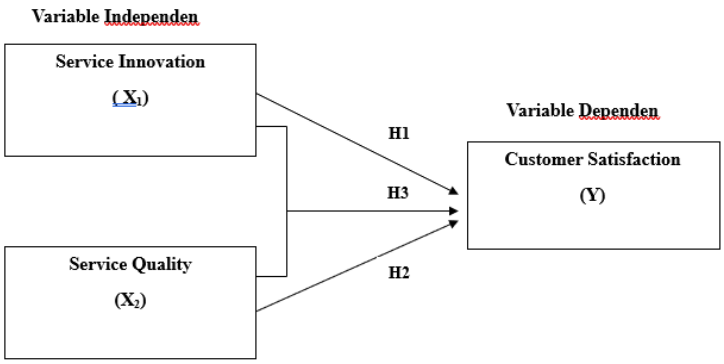
According to Owano et al (in Valentino and Surianto, 2022) stated that service innovation is a change made by a company to perfect and meet market needs in terms of service. According to another opinion from Changkaew et al (in Desembrianita and Sukatmadiredja, 2018) service innovation is a form of new service offered by the

company, new work methods applied by the company and the use of technology over time to fulfill customer desires.

Service quality is the level to which the services provided meet customer expectations and practices that consistently meet customer expectations (Watthanaklang et al., 2024). According to Zeithaml et al (in Nurhadi and Azis, 2018) service quality is a service or service that has the characteristics of meeting or exceeding consumer expectations. Quality must start with consumer needs and end with customer perceptions. Quality is not based on perspective, but customers can determine the quality of their service themselves.

According to Arifuddin et al. (2023), customer satisfaction is when customers feel that their expectations have been met and that they have gotten the best possible outcome. If banking is serious about ensuring the greatest possible consistency between customer happiness and performance, it must take into account consumer capabilities, attention, and requirements. Tjiptono (in Sumarsid and Paryanti, 2022) states that consumers' perceptions of a service's performance in relation to their expectations determine the level of customer satisfaction.

Service innovation and service quality will influence customer satisfaction. Customers will become loyal to the company if the service innovation and quality of services provided and offered to customers meet expectations. This is relevant to research (in Dompak et al., 2018) according to which, increasing customer happiness is a major goal of service innovation and improving service quality.



Source: Data Processed by Researchers, 2023

Figure 2. Hypothesis Model

METHOD

The method used is quantitative method. This research uses survey method which is carried out by distributing questionnaires to customers who use Livin' by Mandiri. According to another opinion from Leedy and Omrod (in Suprantiknya, 2015: 48) the purpose of survey design is to collect information about one or more groups of people with certain characteristics, such as individual characteristics, attitudes, opinions or beliefs about something, by asking a series of questions and tabulate the answers.

Residents of Surabaya City's Tambaksari District who use the Livin' by Mandiri app for are the subjects of this research. Eleven thousand people in the Tambaksari District have downloaded the Livin' by Mandiri app to their mobile devices. In order to find out how many samples to take, the Slovin formula is utilised. The population of users of the Livin' by Mandiri mobile banking application in Tamabaksari District is 11,000 users. One of the methods used to determine the number of samples is by using the Slovin formula. A total of 99 individuals were included in the sample after the Slovin formula was used for computations.

RESULT AND DISCUSSION

Result

Testing Testing the validity of the research data this time using SPSS 27. For the r table itself in this research it is 0.1975. So if you look at r table with a significance level of 0.05, then you get a result of 0.1975. The test results are explained in the table below:

Table 1. Validity Test Results

Variable	Item	R_{table}	R_{count}	Sig.	Explanation
Service Innovation (X1)	X1.1	0,1975	0,743	0,001	Valid
	X1.2	0,1975	0,628	0,001	Valid
	X1.3	0,1975	0,520	0,001	Valid
	X1.4	0,1975	0,669	0,001	Valid
	X1.5	0,1975	0,673	0,001	Valid
Service Quality (X2)	X2.1	0,1975	0,321	0,001	Valid
	X2.2	0,1975	0,456	0,001	Valid
	X2.3	0,1975	0,461	0,001	Valid
	X2.4	0,1975	0,526	0,001	Valid
	X2.5	0,1975	0,557	0,001	Valid
	X2.6	0,1975	0,515	0,001	Valid
	X2.7	0,1975	0,459	0,001	Valid
	X2.8	0,1975	0,544	0,001	Valid
	X2.9	0,1975	0,574	0,001	Valid
	X2.10	0,1975	0,568	0,001	Valid
	X2.11	0,1975	0,519	0,001	Valid
	X2.12	0,1975	0,550	0,001	Valid
Customer Satisfaction (Y)	Y1.1	0,1975	0,620	0,001	Valid
	Y1.2	0,1975	0,631	0,001	Valid
	Y1.3	0,1975	0,624	0,001	Valid
	Y1.4	0,1975	0,625	0,001	Valid
	Y1.5	0,1975	0,707	0,001	Valid
	Y1.6	0,1975	0,774	0,001	Valid

Source: Data Processed by Researchers, 2024

Likewise, a significant score of <0.05 was obtained, it follows that the questionnaire's variables were all deemed legitimate.

Reliability testing used Cronbach's Alpha in this research. The following table displays the test results:

Table 2. Reliability Test Results

No	Variable	Alpha Normal Limit	Cronbach Alpha Value	Explanation
1	Service Innovation	> 0,60	0,647	Reliable
2	Service Quality	> 0,60	0,733	Reliable
3	Customer Satisfaction	> 0,60	0,745	Reliable

Source: Data Processed by Researchers, 2024

All items in the table above are declared reliable.

Testing the normality of the Kolmogorov-Smirnov method, namely Asymp. Sig (2-tailed) > 0.05 in this study. The data is said to be normal that it meets these criteria. The results of the normality test are as follows:

Table 3. Normality Test Results

One Sample Kolmogrov-Smirnov Test	
Kolmogrov-Smirnov Z	0,68
Asymp. Sig (2-tailed)	0,200

Source: Data Processed by Researchers, 2024

It can be seen that a significant score of 0.200 is stated as > 0.05 so it is normally distributed.

Multicollinearity testing can be seen if the VIF value is < 10.00 and the Tolerance value is > 0.10. The test results can be seen in the following table:

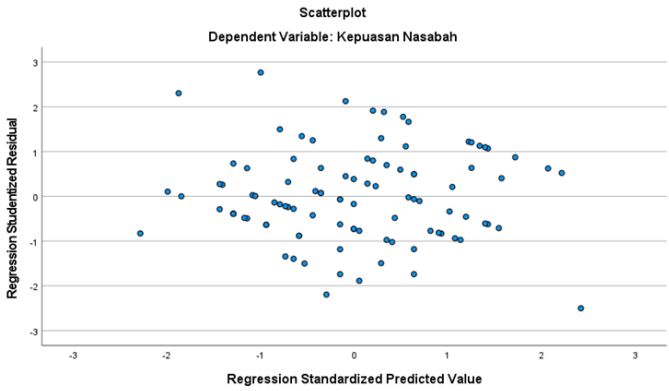
Table 4. Multicollinearity Test Results

Variable	Tolerance	VIF	Explanation
Service Innovation (X1)	0,852	1,156	Multicollinearity did not occur
Service Quality (X2)	0,852	1,156	Multicollinearity did not occur

Source: Data Processed by Researchers, 2024

Every independent variable doesn’t occur multicollinearity.

Heteroscedasticity testing can be checked based on scatterplot diagrams that spread evenly so that the data meets the requirements and heteroscedasticity does not occur.



Source: Data Processed by Researchers, 2024

Figure 3. Scatterplot Diagrams

To get a feel for how X1, the independent variable, affects X2, the dependent variable, researchers employ multiple linear regression testing. A multiple linear regression test was conducted, and the results are presented below:

Table 5. Multiple Linear Regression Test Results

Variabel	*Unstandardized Coefficients*		*Standardized Coefficients Beta*
	B	***Std. Error***	
Constant	6,671	3,021	
Service Innovation (X1)	0,465	0,111	0,384
Service Quality (X2)	0,182	0,057	0,291

Source: Data Processed by Researchers, 2024

We may deduce the following from the multiple linear regression equation:

1. A positive score of 6,671 was associated with the contact. This indicates that 6.671 is the customer satisfaction score when the service innovation and service quality variables are set to 0.
2. 2. 0.465, variable regression coefficient of service innovation. The service innovation variable positively influences customer satisfaction, as seen from this score. An increase in customer satisfaction of 0.465 points was associated with an increase in only one variable of service innovation.
3. 3. At 0.812, the service quality variable regression coefficient is quite strong. With these results, we can see that service quality variables contribute to happy customers. Customer satisfaction was affected by a factor of 0.812 for each improvement in one measure of service quality.

You may use the t test to partly test your hypothesis. As promised, here are the t-test results:

Table 6. t Test Results

Model	T_{count}	T_{table}	Sig.
(Constant)	1,719		0,089
Service Innovation (X1)	4,207	1,985	0,001
Service Quality (X2)	3,186	1,985	0,002

Source: Data Processed by Researchers, 2024

The table displays the study's findings, which demonstrate that both the independent and dependent variables are significant. It is possible to get a t-value of 4.207 > t-table 1.985 and a p-value of 0.001 < 0.05 using the computed t-value. There seems to be a small but statistically significant correlation between customer happiness and the service innovation index. Using a p-value of 0.002, the computed t-value of 3.186 is significantly higher than the t-table value of 1.985 and the significance level of 0.05. We may say that there is a somewhat meaningful relationship between customer satisfaction and the service quality variable.

By using the f test, one may find out whether the dependent variable is equally affected by each independent variable. The number of respondents (n) and the number of independent and dependent variables (k) are used to calculate the degrees of freedom (df1) and (df2), respectively, at a 5% level of significance. What follows are the f test's findings:

Table 7. Test Results f

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	148,670	2	74,335	22,397	< 0,001
Residual	318,623	96	3,319		
Total	467,293	98			

Source: Data Processed by Researchers, 2024

The computed F-value of 22,397 exceeds the F-table value of 3.091, with a much lower value, namely 0.001 < 0.005, as seen in the results of the simultaneous test in the table above. We may accept the third hypothesis of this study and reject H0 since the computed F score from the simultaneous test is greater than the F table.

In order to determine the extent to which one variable may explain another, researchers use the multiple coefficient of determination test. This allows them to see how much of an impact the independent variable has on the dependent variable. Our determinant coefficient test yielded the following results:

Table 8. Determinant Coefficient Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,564	0,318	0,304	1,822

Source: Data Processed by Researchers, 2024

The figure above shows that the R-squared score is 0.318. This means that the independent variable can only explain the dependent variable to a degree of 31.8%. The remaining 68.2% is accounted for by other variables that werent extensively studied in research.

Discussion

The validity test findings indicate that 0.1975 and Sig (2-tailed) < 0.05 are legitimate, as shown by the research results of the R count > R table. A successful reliability test would have a Cronbach Alpha score higher than 0.60. Results from the asymp normality test. The data is normally distributed since Sig (2-tailed) 0.200 > 0.05. Given that the VIF value is below 10.00 and the tolerance value is more than 0.10, it may be inferred that none of the study's variables exhibit multicollinearity. The data does not exhibit heteroscedasticity, as demonstrated by the study findings from the heteroscedasticity test, and the scatterplot diagram is uniformly distributed. Research findings examining the relationship between service innovation and satisfaction with such innovation client happiness is significantly impacted by t-count > t-table. Research using the f-test indicates that customer happiness is significantly affected when F count > F table.

There is a strong correlation between service innovation and customer happiness, according to this study's findings (Syauqi, 2019). Research by (Adam and Sumartana, 2018) that found a strong correlation This study's results are relevant to the relationship service quality and customer satisfaction. This study's findings corroborate those of Dompak et al. (2018), who found that service quality and innovation significantly impact customer happiness.

CONCLUSSION

Based on the research results, a significant influence was obtained on the variables of service innovation, service quality on customer satisfaction, so that Bank Mandiri is expected to continue to improve service innovation, service quality with the aim of attracting customer interest in using the Livin 'by Mandiri mobile banking application. In addition, continue to develop service innovation on the Livin' by Mandiri mobile banking application by adding various e-wallet services, such as DOKU, iSaku, and can add inter-bank or non-bank transfer features without customers having to log in first. Then pay attention to the quality of service on the Livin' by Mandiri mobile

banking application which can update faster technology so that customers do not often experience errors on the Livin' by Mandiri mobile banking application and can provide tighter data security so that there is no theft of data or money belonging to customers in the Livin' by Mandiri mobile banking application.

Bank Mandiri needs to provide the best solution when receiving customer complaints about the Livin' by Mandiri mobile banking application so that customers remain satisfied with the service. Customer satisfaction is a very important thing, so that it can have a positive impact on Bank Mandiri.

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