

The Relationship Of Customer Engagement, Customer Trust, Customer Satisfaction And Customer Loyalty Of Mobile Banking Usage In Indonesia

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Abstract:

Background: The Industrial Revolution 4.0 is driving digital banking transformation in Indonesia. Banking services have moved towards digital banking services. Digital transactions increased significantly from 2021 to 2023, and it will continue in 2024, in line with the acceleration digital banking and public preference for online mobile banking transactions, which affect mobile banking adoption. The opportunity for cross-selling through mobile banking brought banking marketing strategies towards a more complex and broad strategy called customer engagement. The difference between previous studies' results regarding customer engagement and the role of customer engagement in customer trust, customer satisfaction, and customer loyalty needs to be studied. This research aims to know the relationship between customer engagement, customer trust, customer satisfaction, and customer loyalty in the usage of mobile banking in Indonesia.

Materials and Methods: This study was conducted in Indonesia using quantitative research with a cross-sectional approach. The sampling method used was nonprobability sampling by purposive sampling. The population of this research is selected banks' mobile banking users in Indonesia. The primary data was collected from 244 samples and then analyzed using Structural Equation Models (SEM), assisted by Lisrel 8.8.

Results: The results of this study show that customer engagement significantly increases customer trust. Customer engagement also significantly affects customer loyalty and satisfaction. Customer trust has a positive and significant effect on customer loyalty and satisfaction, and customer satisfaction has a positive and significant impact on customer loyalty.

Conclusion: Customer engagement significantly increases customer trust and satisfaction, which leads to increased customer loyalty

Keyword: customer engagement, customer trust, customer satisfaction, customer loyalty, mobile banking

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I. Introduction

The development of information technology has brought the world into a new era, often called the era of Industrial Revolution 4.0. Technological developments during the Industrial Revolution 4.0 have encouraged the emergence of new digital-based businesses that are much more efficient and innovative. The Industrial Revolution 4.0 has also penetrated the banking sector, which directly requires banks to be able to adapt and continue to innovate. There are 4 (four) demands for significant change in the banking industry: changing consumer expectations, improving the quality of banking products and services by utilizing data, the emergence of new partnerships with big-tech and start-up companies, as well as changing the operational model to a digital business model¹. The development of digital technology will continue to change the banking paradigm in Indonesia. Based on a survey of financial services, customers in Indonesia show a significant growth in the use of mobile banking, which shows that digital channels will become increasingly important in building loyalty and generating growth for financial institutions².

Another factor that drives digital transformation is Covid-19. The outbreak of Covid-19 pandemic in 2020 has prompted calls for social distancing, which limits people's mobility. The Indonesian government also promotes cashless payment to support the New Normal³, which causes people to adapt to activities carried out virtually due to restrictions on direct activities to reduce the potential of Covid-19 virus transmission. People are required to quickly adapt, including carrying out financial transactions via digital platforms. Even though the cashless transaction trend was already increasing before the Covid-19 pandemic, the emergence of the pandemic has also accelerated this process.

The use of digital banking services has increased in Indonesia. Digital transactions have risen significantly in 2021 and will continue due to increasing public acceptance and preference for online transactions, the expansion and convenience of digital payment systems, and the acceleration of digital banking⁴.

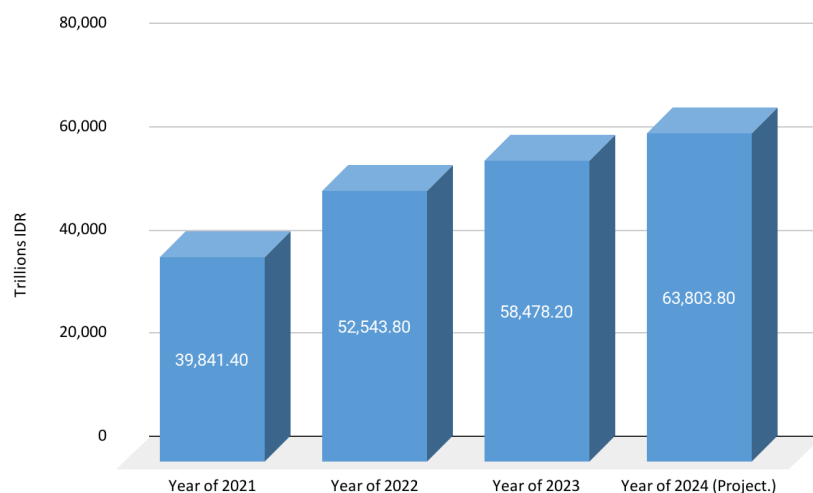


Figure 1. Growth in Digital Banking Transaction in Indonesia (in trillion)

Figure 1 shows that the value of digital banking transactions has increased. In 2021, the value of digital banking transactions reached IDR 39,841.4 trillion. In 2022, the value of digital banking transactions again experienced growth of 31,88% (yoy), or reached IDR 52,543.8 trillion. In 2023, the value of digital banking transactions again experienced growth of 11,29% (yoy) or reached IDR 58.478,2 trillion. Bank Indonesia projects that the value of digital banking transactions in Indonesia will grow by 9,11% (yoy) or reach IDR 63.803,8 trillion by the end of 2024⁵.

Indonesia also showed considerable growth in internet and mobile banking adoption⁶. The following is the data on the growth of mobile banking users in the 3 (three) largest state-owned banks in Indonesia.

Table 1. Growth of Mobile Banking Users in Indonesia (in million)

Bank	2019	2020	▲/▼ (yoy)	2021	▲/▼ (yoy)	2022	▲/▼ (yoy)	2023	▲/▼ (yoy)
BRI	3,0	9,1	203.3%	14,2	56.9%	23,8	67.6%	31,6	32.8%
Bank Mandiri	3,2	6,5	103.1%	9,8	50.8%	16,0	63.3%	25,0	56.3%
BNI	4,8	7,7	60.4%	10,8	40.3%	13,6	25.9%	16,3	19.9%

Table 1. shows the growth of mobile banking users from 2019 to 2023^{7,8,9,10,11,12,13,14,15,16,17,18}. BRI, Bank Mandiri, and BNI significantly grew mobile banking users in Indonesia, especially during the Covid-19 outbreak in 2020. The data is in line with previous research showing that mobile banking adoption has experienced higher rates during Covid-19, which was influenced by the lockdown procedures taken by most governments worldwide¹⁹. The growth of mobile banking users, which is supported by developments in technology, social media, and people's lifestyles, provides benefits to the banking industry, including generating fee-based income from customer transactions when using digital banking services. Mobile banking technology allows banks to operate in new geographic zones, target markets, and product scopes²⁰.

Before the digitalization shift driven by the Industrial Revolution 4.0 era, banks used cross-selling as a marketing strategy. However, more was needed because banking customers were faced with an increasing number of innovative channels. Customers today tend to shop and do business with banks that offer the best service, which usually means the fastest service²¹. The opportunity for cross-selling through mobile banking brings the banking product marketing strategy towards a more complex and broad strategy. Conceptually, ²² believe that customer engagement can be seen as an expanded field of marketing relationships.

Customer engagement is defined as the intensity of individual participation and its relationship with organizational offers and activities that arise from customers and organizations²³. In simple terms, customer engagement is an effort that involves customers through physical and emotional interactions between the organization and users. Customer engagement is also a tool for building long-term relationships with users. So, banks can realize customer engagement by paying attention to the relationship between the company and its customers. Apart from that, customer engagement can also improve a company's ability to communicate interactively with customers. Customers are no longer seen as passive recipients of marketing activities but as active participants in a valuable interactive (co-creation) process²⁴.

Many companies are developing mobile applications as a new channel to interact with customers²⁵, including mobile banking as a mobile application. A key factor for success in mobile apps is customer

engagement. Recent research has revealed that customer engagement affects customer loyalty²⁶ in the context of mobile apps. Apart from that, previous study²⁷ explained that positive customer engagement strongly influences customer loyalty. However, this is not supported by other research results²⁸ that concluded customer engagement weakly influences customer loyalty.

Despite this, there is limited research on the influence of customer engagement with mobile banking and the impacts of customer engagement²⁹. While customers are adopting mobile banking for digital banking services, banks need to be aware of the factors influencing customer engagement and its impacts. As a result, this research aims to address this knowledge gap. Further research needs to be carried out regarding the role of customer engagement in building long-term relationships with customers. Several researchers explain that the consequences of customer engagement are satisfaction, trust, and loyalty^{30,31}. This research was analyzed by assessing customers with criteria of at least twelve months of mobile banking usage to identify and analyze customer engagement and its influence on customer trust, customer satisfaction, and customer loyalty in mobile banking usage.

II. Material And Methods

This research was conducted in Indonesia. This research used quantitative research with a cross-sectional approach. The population of this research are mobile banking users of BRI, Bank Mandiri, and BNI. The sample used in this research was 244 samples. The sampling method used was nonprobability sampling by purposive sampling. This research used four variables: customer engagement (X1), customer trust (X2), customer satisfaction (X3), and customer loyalty (Y1). This research used online questionnaires. The research questionnaire was prepared by asking closed questions with answer choices, which were then distributed to respondents using Google Forms in 2023. The questionnaire uses a Likert scale. The primary data collected from respondents is analyzed using Structural Equation Models (SEM), assisted by Lisrel 8.8. This research conceptual model is shown in Figure 2 below:

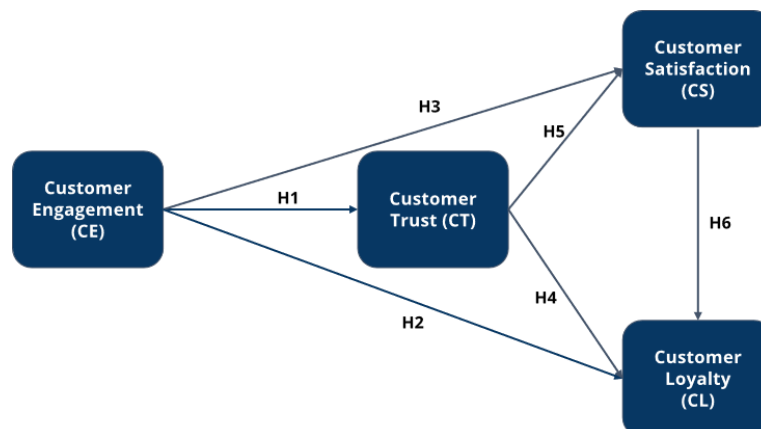


Figure 2. Research Conceptual Model

III. Result

The research results show that most male respondents totaled 132 (54.1%), while female respondents totaled 112 (45.9%). The majority of respondents were aged 17 - 25 years. Most of the respondents live in Java Island and work as employees. The distribution of respondents in this study was dominated by respondents who used BRI mobile banking at 131 people (53.7%), followed by the Livin' by Mandiri application at 69 people (28.3%), and BNI Mobile at 44 people (19.0%). Most respondents use mobile banking services for transfer transactions, amounting to 111 people (45.5%). This research aims to see the relationship between customer engagement, customer trust, customer satisfaction, and customer loyalty of mobile banking usage in Indonesia. Customer engagement is defined as the intensity of individual participation and its relationship to organizational offerings and activities that arise from customers and organizations²³. Customer trust is a catalyst in every interaction between buyers and sellers. Trust is built in interactions and transactions between unknown parties^{32,33}. Customer satisfaction is an attitude after the final purchase process formed psychologically based on comparing what was expected and the reality obtained³⁴. Customer Loyalty can be defined as a customer's intention or tendency to buy from the same seller or the same brand again³⁵ and is the result of the belief that the value received from that seller/brand is higher than the value available from alternatives³⁶.

This research carried out normality tests, validity tests, reliability tests, and model suitability tests. The normality assumption can be tested with z-statistical values for skewness and kurtosis. If the z-value, both skewness and kurtosis, are significant (less than 0.05 at the 5% level), then it can be said that the data distribution is not normal. On the other hand, if the z-value, both skewness and kurtosis, are not significant (greater than 0.05

at the 5% level), then it can be said that the data distribution is normal. The results showed that the p-value for skewness and kurtosis for all indicators is above 0.05, which indicates that the data used has a normal distribution³⁷. The validity test in this research was carried out to measure whether the data obtained was valid.

In contrast, reliability testing was carried out to measure the extent to which measurement results using the same object will produce the same data. By carrying out a reliability test, the data used can show consistency in the questionnaire results, which is an indicator of the variable or construct. A questionnaire is said to be reliable if a person's answers to questions are consistent or stable over time³⁸. The output from Lisrel is in the form of standard loading factors (SLF), which shows that all indicators have an SLF value above 0.50, which means they all have a good level of validity³⁹. The CR values are above 0.70, and the AVE values are above 0.50. This shows that the data used is reliable, according to theory⁴⁰. Based on this, it is concluded that all indicators can be used in these research models.

In the SEM model, the measurement model and structural model parameters are estimated jointly and must meet the demands of model fit. I, the values of GFI, AGFI, NFI, RFI, IFI, and CFI will range between 0 (poor fit) and 1 (perfect fit). A value ≥ 0.90 is a good fit, while a value between 0.80 and 0.90 is often referred to as a marginal fit⁴¹. Meanwhile, an RMSEA value ≤ 0.08 indicates a good fit⁴². It can be said that the AIC and CAIC values will be better if the value is smaller⁴³. In an empirical assessment, researchers do not have to fulfill all the goodness of fit criteria; using 4 - 5 goodness of fit criteria is enough to test the feasibility of the model⁴⁰. Based on the output results in Table 2. It can be seen that the model test results are a good fit overall. The goodness-of-fit test shows that the model is fit, so it is ready to be used and can be used as a basis for the analysis of this research.

Table 2. Goodness of Fit Test

Parameters	Criteria	Results	Significance
Chi Sq/df	chi-square $\leq 2df$ (good fit), $2df < \text{chi-square} \leq 3df$ (marginal fit), $\text{chi-square} > 3df$ (bad fit)	117.55 $\leq (2*98)$	good fit
p value	$p \geq 0.05$ (good fit), $p < 0.05$ (bad fit)	0.0870	good fit
GFI	$GFI \geq 0.9$ (good fit), $0.8 \leq GFI < 0.9$ (marginal fit)	0.9337	good fit
AGFI	$AGFI \geq 0.9$ (good fit), $0.8 \leq AGFI < 0.9$ (marginal fit)	0.9080	good fit
RMSEA	$RMSEA \leq 0.08$ (good fit), $0.08 < RMSEA \leq 1$ (marginal fit)	0.0286	good fit
RFI	$RFI \geq 0.9$ (good fit), $0.8 \leq RFI < 0.9$ (marginal fit)	0.9893	good fit
NFI	$NFI \geq 0.9$ (good fit), $0.8 \leq NFI < 0.9$ (marginal fit)	0.9913	good fit
CFI	$CFI \geq 0.9$ (good fit), $0.8 \leq CFI < 0.9$ (marginal fit)	0.9985	good fit
AIC	less than saturated AIC (272)	193.5467	good fit
CAIC	less than saturated CAIC (883.6149)	364.4391	good fit

This research tested the influence of customer engagement, trust, and satisfaction on customer loyalty in mobile banking using structural equation modeling (SEM). The significance of the estimated parameters provides beneficial information about the relationships between latent variables. In assessing the relationship between variables as having a significant influence, the t-value will be compared with the t-table. The limit for accepting or rejecting a relationship with a significance level of 5% is 1.96 (absolute), where if the t-value is between -1.96 and 1.96, then the hypothesis stating that there is an influence must be rejected. In contrast, if the t-value is greater than 1.96 or smaller than -1.96, it must be accepted with a significance level of 5%⁴⁴.

The correlation coefficient is a measure used to determine the degree of relationship between variables. The standard correlation coefficient displayed in Lisrel measures the closeness of the linear relationship between two variables with a normal data distribution. The coefficient is between -1 and 1; if it is positive, then the relationship shows the same direction and is increasing. Conversely, if it is negative, the relationship is unidirectional and decreasing. The standard correlation coefficient of 0.10 to 0.29 is categorized as having a weak relationship, 0.30 to 0.49 is categorized as moderate, and 0.50 to 1 is categorized as strong^{45 46}. The results of hypothesis testing can be seen in Table 3.

Table 3. Hypothesis Testing Results

Hypothesis	Influence	Coef.	T-Value	T-Table	Result
H1.	Customer engagement \rightarrow Customer trust	0,7390	18,6919	1,96	Significant
H2.	Customer engagement \rightarrow Customer loyalty	0,4000	12,6421	1,96	Significant
H3.	Customer engagement \rightarrow Customer satisfaction	0,5675	12,5008	1,96	Significant
H4.	Customer trust \rightarrow Customer loyalty	0,2422	10,5587	1,96	Significant
H5.	Customer trust \rightarrow Customer satisfaction	0,4871	12,5141	1,96	Significant
H6.	Customer satisfaction \rightarrow Customer loyalty	0,4393	13,1071	1,96	Significant

IV. Discussion

This research examines the relationship between customer engagement, customer trust, customer satisfaction, and customer loyalty of mobile banking usage in Indonesia. The results highlight that customer engagement influences customer trust, customer satisfaction, and customer loyalty.

The first hypothesis tests whether customer engagement has a positive and significant effect on customer trust. The test results in a t-value of 18,691 and a correlation coefficient of 0.7390. These results indicate that the value is significant because the t-value is greater than the t-table, so the first hypothesis is supported and the relationship between variables is strong. Customer engagement is proven to have a significant influence on customer trust.

Previous research⁴⁷ tested the relationship between customer engagement, satisfaction, and loyalty. Customer engagement is reflected in indicators of customer habits or activation, cognitive, and customer affection towards mobile banking services. The results show that customer engagement influences customer trust. More research shows that customer engagement significantly affects trust⁴⁸ and another one also concludes that customer engagement increases customer trust⁴⁹.

The second hypothesis tests whether customer engagement has a significant influence on customer loyalty. The test results in a t-value of 12,642 and a correlation coefficient of 0.4000. From these results, it is stated that the value is significant, because the t-value is greater than the t-table, so the second hypothesis is supported and the relationship between variables is medium. Customer engagement is proven to have a significant influence on customer loyalty.

The hypothesis is accepted and following research conducted⁵⁰, increasing customer engagement supports the achievement of business performance, including sales growth, cost reduction, customer experience, superior profitability, and customer loyalty. This study shows that the higher the customer engagement, the higher the customer loyalty. The emotional aspect of engagement is also important in enhancing customer loyalty. Engaged customers may be proud of the product and further strengthen a strong psychological connection with the particular product. These connection increases make it more likely customers will have an ongoing relationship with the brand and this relationship will motivate them to recommend the brand to others. Thus, engaged customers are more likely to have higher behavioral intentions to repurchase the product and recommend the brand to others than non-engaged customers. The results of the relationship between customer engagement and customer loyalty are also reflected in this research on customer loyalty indicators including repurchase action, recommendation, and retention.

The third hypothesis tests whether customer engagement has a significant influence on customer satisfaction. The test results in a t-value of 12,500 and a correlation coefficient of 0.5675. From these results, it is stated that the value is significant because the t-value is greater than the t-table, so the third hypothesis is supported, and the relationship between variables is strong. Customer engagement is proven to have a significant influence on customer satisfaction.

The specific nature of customer engagement influences the level of customer satisfaction. Research conducted⁵¹ about the use of applications in mobile banking shows that customers feel better value when they engage with applications both behaviorally and emotionally. The relationship between customers and the company can influence customer satisfaction based on the level of customer emotional relationship and interaction⁵². Satisfaction can be seen in customers' affective responses, such as feelings of joy and pleasure when customers use a product or service⁵³. If the product or service follows customers' expectations, customers will feel satisfied⁵⁴. More research⁵⁵ shows indicators of customer satisfaction with internet banking products and also applied in this research, which include responsiveness to problems, security, comfort, reliable products, and the presence of an element of tangibility or the ability of a product to provide excellent service to customers in concrete terms.

The fourth hypothesis tests whether customer trust has a positive and significant influence on customer loyalty. The test results in a t-value of 10,558 and a correlation coefficient of 0.2422. From these results, it is stated that the value is significant because the t-value is greater than the t-table, so the fourth hypothesis is supported, and the relationship between variables is weak. Customer trust is proven to have a significant influence on customer loyalty.

Previous research⁵⁶ explains that customer satisfaction will increase over time when the customer's trust is satisfied. On the other hand, gaining customer trust will significantly contribute to customer loyalty. When customers trust a service provider, they will continue using it and even recommend it to others. Previous research has revealed that customer trust is critical to customer retention and loyalty. It emphasizes the importance of customer trust in building long-term relationships and achieving loyalty⁵⁷. Customers will feel satisfied if the indicators of trust are met, such as initial trust and perceived benefits, which is in line with the results of this research, which states that indicators of customer trust are initial trust, guarantees, and perceived benefits⁵⁸.

The fifth hypothesis tests whether customer trust has a positive and significant influence on customer satisfaction. The test results in a t-value of 12,514 and a correlation coefficient of 0.4871. These results indicate that the value is significant because the t-value is greater than the t-table. Thus, the fifth hypothesis is supported,

and the relationship between variables is medium. Customer trust is proven to have a positive and significant influence on customer satisfaction.

Customer trust influences satisfaction in the long term⁵⁹; when customers' feelings of trust in a service provider are satisfied, their satisfaction will increase over time⁵⁶. In this research, customers who use mobile banking trust and obtain benefits and guarantees from their mobile banking services, which significantly affects customer satisfaction. Mobile banking service providers who pay attention to security guarantees and the benefits customers feel when using mobile banking build customer trust. This trust influences customer satisfaction in the long term. As customer trust in mobile banking services is gained, their satisfaction will increase.

The sixth hypothesis tests whether customer satisfaction has a positive and significant influence on customer loyalty. The test results in a t-value of 13,107 and a correlation coefficient of 0.4393. From these results, it is stated that the value is significant because the t-value is greater than the t-table, so the sixth hypothesis is supported, and the relationship between variables is medium. Customer satisfaction is proven to have a positive and significant influence on customer loyalty.

The hypothesis follows research results⁶⁰, which suggest that effective satisfaction must create customer loyalty. Previous studies have shown that customer satisfaction positively influences customer loyalty^{61 62} or negatively influences switching intentions⁶³. In this research, customers who trust and obtain benefits and guarantees from their mobile banking services, so it significantly affects customer loyalty. Customer satisfaction is important in growing customer loyalty⁶⁴ Regarding banking, customers will choose banks that can provide satisfaction, both in service activities and in the product features offered⁶⁵.

V. Conclusion

Customer engagement significantly increases customer trust and satisfaction, which leads to increased customer loyalty of mobile banking usage in Indonesia. Customer engagement is reflected in customer habits, cognitive aspects, and customer affection towards mobile banking services, which then affect customer trust, customer satisfaction, and customer loyalty. Customer trust has a significant effect on customer loyalty and customer satisfaction. This happens when customers who trust mobile banking obtain benefits and guarantees from their mobile banking services, thereby increasing customer satisfaction and loyalty. Customer satisfaction has a positive and significant effect on customer loyalty. Customer satisfaction is influenced by the experience while using mobile banking, which is the banks' responsiveness, reliability, comfort, security, and tangibility. When customers have had good experiences using mobile banking services consistently, this leads to customer loyalty. Therefore, banks must continuously adapt and innovate to provide secure, compatible, and user-friendly mobile banking supported by a responsive complaint-handling system. This can be done by actively conducting customer research to obtain customers' feedback and understand their pain points for future improvements to meet their needs through new features on mobile banking.

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