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The Influence of Digital Happiness, Ease of Access, Transaction Security, and Feature Innovation on Digital Loyalty

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Abstract

The rapid development of digital technology has transformed the banking industry, particularly through the emergence of mobile banking services that enable users to conduct financial transactions more efficiently and conveniently. As competition among digital banking platforms intensifies, understanding the factors that influence customer loyalty has become increasingly important. This study aims to examine the influence of digital happiness, ease of access, transaction security, and feature innovation on digital loyalty among mobile banking users. This research employed a quantitative approach using a survey method. Data were collected from 412 mobile banking users through structured questionnaires. The data were analyzed using multiple linear regression analysis to examine the relationships between the independent variables and digital loyalty. The results show that digital happiness, ease of access, transaction security, and feature innovation have positive and significant effects on digital loyalty. These findings suggest that both emotional factors (digital happiness) and functional factors (ease of access, security, and innovation) play important roles in enhancing digital loyalty. Therefore, banking institutions should focus on improving user experience, strengthening transaction security, and continuously developing innovative features to maintain long-term relationships with customers in the digital banking environment.

Keywords

Digital Happiness, Digital Loyalty, Ease of Access, Feature Innovation, Mobile Banking, Transaction Security.

1. Introduction

Digital transformation has reshaped the structure of the global financial industry. Banking institutions increasingly rely on digital platforms to deliver financial services to customers in a more efficient and accessible way. One of the most popular digital channels nowadays is mobile banking apps, which let users utilize smartphones to perform financial tasks like money transfers, bill payments, balance queries, and online purchases (Kumar et al., 2024). Digital banking services provide flexibility and convenience for customers who expect financial transactions to be performed anytime and anywhere.

The rapid expansion of internet connectivity and smartphone adoption is intimately linked to the development of digital banking services. According to global digital statistics, there were over 5.35 billion internet users in 2024, or nearly 65% of the world's population (Laukkanen, 2017). This expansion of internet connectivity supports the rapid development of digital platforms across industries, including the financial sector. Indonesia represents one of the fastest-growing digital economies in Southeast Asia. The number of internet users in Indonesia reached approximately 221 million people in 2024, equivalent to more than 79% of the total population. Smartphone ownership has also expanded significantly, with penetration levels exceeding 89% of the population (Statista, 2024). These developments create favorable conditions for the growth of digital financial services, particularly mobile banking applications.

Customers are increasingly shifting from traditional banking to mobile-based financial services as digital technologies expand, with over 60% of banking customers in Indonesia actively using mobile banking and total digital transactions reaching around IDR 5,300 trillion in 2024, growing by nearly 19% annually (Rahi et al., 2020). Despite this growth, customer retention remains a key challenge, as continued usage depends on factors such as satisfaction, trust, emotional engagement, and system performance (Singh et al., 2017). In this context, digital loyalty, defined as users' commitment to repeatedly use and recommend a platform, becomes crucial for fostering long-term relationships and sustaining engagement in digital banking (Kim & Yang, 2025).

Emotional experience has become an important factor in digital platform usage. The concept of digital happiness refers to a positive psychological condition experienced by users when interacting with digital technology. Digital happiness reflects feelings of enjoyment, comfort, and satisfaction generated during interactions with digital services (Büchi, 2024). Positive emotional experiences contribute to stronger user attachment to digital platforms and encourage continuous usage behavior. Technological attributes also influence digital service engagement. Ease of access represents the degree to which digital systems are simple to operate and easy to navigate (Davis, 1989). Applications that provide intuitive interfaces and efficient interaction processes improve user satisfaction and increase service usage (Venkatesh et al., 2022). Users' opinions on the quality of digital services are significantly influenced by accessibility.

Security is another critical factor in digital financial platforms. Mobile banking applications process sensitive personal and financial information, making transaction security an essential element of digital banking systems. Perceived security influences users' trust in digital platforms and affects their willingness to continue using digital financial services (Lee, 2009). Strong security mechanisms reduce perceived risks associated with online financial transactions. Continuous innovation in digital service features also contributes to the sustainability of digital banking platforms. Feature innovation refers to the development of new functionalities designed to improve service value and enhance the user experience. Innovative features such as digital payment integration, financial management tools, and

personalized services enable digital banking platforms to deliver greater value to users.

Empirical studies on mobile banking adoption frequently focus on technological acceptance factors such as perceived usefulness and perceived ease of use. Limited research integrates emotional experience variables, such as digital happiness with technological attributes including ease of access, transaction security, and feature innovation in explaining digital loyalty behavior in mobile banking environments. This study develops a digital loyalty model of mobile banking application users by examining the influence of digital happiness, ease of access, transaction security, and feature innovation from the perspective of digital banking business strategy. This study aims to examine the effect of digital happiness, ease of access, transaction security, and feature innovation on digital loyalty among mobile banking users.

2. Literature Review and Hypothesis Development

2.1. The Effect of Digital Happiness on Digital Loyalty

Digital banking has developed into a crucial part of contemporary financial services. Mobile applications are being used by financial organizations more and more to enhance client satisfaction and enable smooth financial transactions. With mobile banking, clients can use digital platforms to carry out financial tasks, including payments, transfers, and financial monitoring more effectively and flexibly (Shaikh et al., 2023). Customer loyalty in digital environments is conceptualized as digital loyalty, which reflects the intention of users to continue using a digital service and maintain long-term engagement with a platform. Digital loyalty emerges when users perceive consistent value and positive experiences during interactions with digital services (Bischoff et al., 2019). Digital happiness refers to a positive emotional condition experienced by individuals when interacting with digital technologies. The concept describes the psychological satisfaction and enjoyment derived from digital experiences, particularly when technology supports user needs effectively (Chawla & Joshi, 2020).

Research in digital service environments shows that emotional responses influence users' attitudes toward digital platforms. Positive emotional experiences increase user satisfaction and encourage stronger engagement with digital services (Thakur, 2019). Emotional attachment formed through positive digital experiences strengthens users' willingness to maintain long-term relationships with digital platforms. In the context of mobile banking applications, digital happiness may occur when users perceive that digital platforms provide convenience, reliability, and pleasant interaction experiences. Positive emotional responses can strengthen users' commitment to digital services and increase their intention to continue using the platform.

H1: Digital happiness has a positive and significant influence on digital loyalty.

2.2. The Effect of Ease of Access on Digital Loyalty

Ease of access refers to the extent to which users can easily understand, navigate, and operate a digital system, which is a key element in technology adoption and user experience. Systems with simple interfaces and intuitive interactions reduce cognitive effort and enhance satisfaction (Alalwan et al., 2022). In the context of mobile banking, ease of access is critical because users expect fast, accurate, and seamless transactions. Applications that simplify procedures and provide clear navigation not only improve usability but also strengthen user confidence in digital platforms. Moreover, ease of access contributes to perceived service quality, as accessible systems enable users to interact efficiently without technical barriers, thereby supporting positive evaluations of digital services.

The relationship between ease of access and digital loyalty is supported by various empirical studies. Ease of use has been found to positively influence customer satisfaction, trust, and ultimately loyalty (Zhou 2012; Wilson et al., 2021). Similarly, providing users with direct and easy access to evaluate services enhances brand loyalty (Habes et al., 2020). From a behavioral perspective, higher ease of use also encourages deeper user engagement, increasing perceived usefulness and enjoyment (Jo, 2023). In digital financial services, system usability and accessibility significantly affect continued usage intentions and satisfaction (Alalwan et al., 2022). By reducing operational complexity, digital platforms can strengthen user engagement and foster long-term loyalty toward mobile banking services.

H2: Ease of access has a positive and significant influence on digital loyalty.

2.3. The Effect of Transaction Security on Digital Loyalty

Security is a critical component of digital financial systems, particularly in mobile banking, where users exchange sensitive information such as personal data and transaction details (Vishnuvardhan et al., 2020). Users tend to assess the level of security before engaging in financial activities, making it a key determinant of system acceptance. Effective cybersecurity strategies are essential to ensure secure, trustworthy, and sustainable user relationships while maintaining a balance between security and usability to enhance customer experience (Islam, 2024). Perceived security reduces potential risks associated with online transactions and strengthens user confidence in digital platforms (Oliveira et al., 2014). This is typically supported by mechanisms such as encryption, multi-factor authentication, and fraud detection systems, alongside bank security features including security tokens (both hardware- and software-based), mobile number verification linking a single number to one CIF, Safety Mode, cardless account options to prevent skimming and card trapping, and biometric authentication, all of which collectively enhance the perceived reliability of mobile banking services (Pertwi et al., 2024).

The relationship between security and digital loyalty is strongly mediated by trust and customer satisfaction. Studies show that perceived security positively influences emotional factors such as trust and satisfaction, which in turn drive loyalty behavior (Cui et al., 2015). Similarly, privacy and security features have been found to enhance customer satisfaction, ultimately increasing loyalty toward digital banking services (Utomo & Yasirandi, 2024). When users feel that their data and transactions are well protected, they are more likely to develop a long-term commitment to the platform. Empirical evidence also confirms that perceived security significantly affects trust and loyalty in financial technology contexts. A secure digital environment, therefore, plays a vital role in encouraging continuous usage and strengthening user loyalty.

H3: Transaction security has a positive and significant influence on digital loyalty.

4.3. The Effect of Feature Innovation on Digital Loyalty

Innovation is a critical factor in maintaining competitiveness in digital financial markets, particularly through the development of new features that enhance service quality and user experience. Feature innovation refers to the introduction of advanced digital functionalities such as integrated payment systems, financial planning tools, personalized recommendations, and digital investment services. These innovations enable financial institutions to create added value while improving service efficiency and responsiveness to customer needs. From a theoretical perspective, innovation supports value creation and differentiation, allowing firms to remain relevant in rapidly evolving digital ecosystems (Boateng et al., 2016). Continuous innovation also strengthens user interaction with digital

platforms, as improved features reduce friction and increase convenience, ultimately shaping positive user perceptions.

The relationship between feature innovation and digital loyalty is supported by various empirical findings. Innovative features have been shown to enhance user engagement and increase customer retention in digital platforms. Furthermore, innovation can strengthen the relationship between perceived benefits and consumer loyalty, indicating its moderating role in sustaining long-term engagement (Channa et al., 2022). The design of creative and innovative features, including loyalty programs, also significantly influences both attitudinal and behavioral loyalty (Zikienė et al., 2024). In addition, product innovation contributes to positive word of mouth, which further reinforces brand image and customer loyalty (Ferdiansyah et al., 2025). These findings highlight that continuous feature innovation is essential for fostering sustained user loyalty in digital financial services.

H4: Feature innovation has a positive and significant influence on digital loyalty.

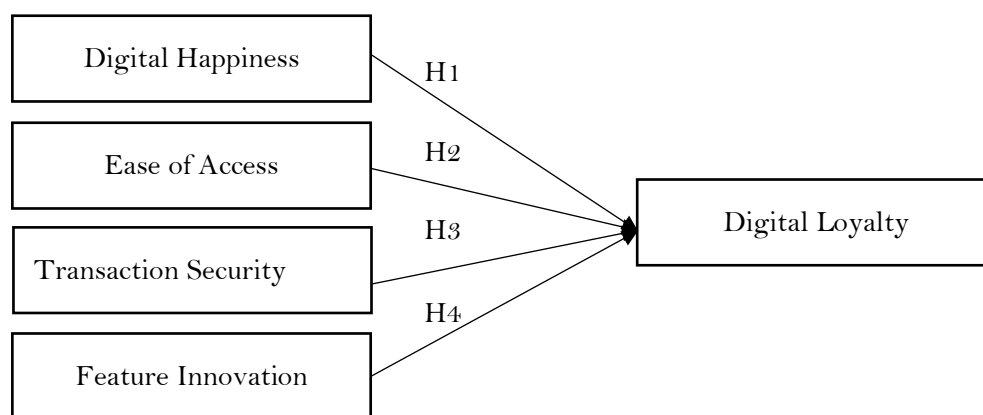


Figure 1. Conceptual Framework

The conceptual framework in Figure 1 illustrates the proposed relationships between four independent variables, namely, digital happiness, ease of access, transaction security, and feature innovation, and the dependent variable, digital loyalty. Each construct is hypothesized to have a direct positive effect on digital loyalty, as indicated by H1 through H4. Digital happiness reflects users' emotional satisfaction, while ease of access represents system usability and convenience. Transaction security captures users' perceptions of safety and data protection, and feature innovation refers to the continuous development of application functionalities. These factors are expected to influence users' commitment to consistently use and recommend mobile banking services, thereby strengthening digital loyalty.

3. Methods

This study utilizes a quantitative approach to analyze the factors affecting digital loyalty among mobile banking users, allowing for systematic examination of variable relationships through statistical methods and empirical data. It applies an explanatory research design to explore causal links between independent variables and the dependent variable, digital loyalty. Primary data were collected using a survey method targeting active mobile banking users, as this approach is effective for capturing user perceptions and experiences in studies of consumer behavior and digital technology adoption.

The population of this study consists of individuals who use mobile banking applications for financial transactions, as they directly interact with digital banking

features. A purposive sampling technique was applied based on the criteria that respondents have experience using mobile banking, have conducted financial transactions through it, and have used the application for at least six months. A total of 412 respondents were included, which is considered sufficient for regression-based behavioral research, as sample sizes above 200 are generally adequate for statistical analysis and hypothesis testing. Primary data for this study were obtained through an online questionnaire distributed to mobile banking users via digital communication channels and social media to reach active users. All items were measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5), which is commonly used in behavioral and technology adoption research to capture individuals' attitudes and evaluations of digital services.

The variables in this study were measured using indicators adapted from prior research on digital services and consumer behavior. Digital happiness was assessed through indicators of enjoyment, satisfaction, and positive emotional responses during mobile banking use. Ease of access was measured by system usability, ease of navigation, and accessibility of the application. Transaction security was evaluated using indicators such as data protection, transaction safety, and privacy protection (Oliveira, 2023). Feature innovation was captured through innovative features, service improvement, and continuous digital development. Meanwhile, digital loyalty was measured by users' intention to continue using the application, willingness to recommend it to others, and long-term commitment to the platform (Bischoff et al., 2019).

The data in this study were analyzed using multiple linear regression. Statistical analysis was conducted using IBM SPSS, preceded by validity testing through Pearson correlation ($r > 0.30$) and reliability testing using Cronbach's Alpha ($\alpha > 0.70$) to ensure measurement accuracy and consistency. Classical assumption tests, including normality and multicollinearity, were also performed to confirm that the regression model met statistical requirements. Hypothesis testing was carried out using t-tests with a significance level of 0.05 ($p < 0.05$), while the coefficient of determination (R^2) was used to assess the model's explanatory power in explaining variations in digital loyalty. The regression model applied in this research is formulated as follows:

$$DL = \alpha + \beta_1DH + \beta_2EA + \beta_3TS + \beta_4FI + \epsilon$$

Where:

DL = Digital Loyalty

DH = Digital Happiness

EA = Ease of Access

TS = Transaction Security

FI = Feature Innovation

β_1 - β_4 = Regression Coefficient

α = Constanta

e = Terms of Error

4. Results

This survey involved 412 respondents in total. An overview of the traits of mobile banking users participating in the study is given by the demographic profile of respondents. The study's respondent demographics are displayed in Table 1.

Table 1. Respondent Demographic Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Male	214	51.9%
	Female	198	48.1%
Age	18–25 years	136	33.0%
	26–35 years	178	43.2%
	36–45 years	71	17.2%
	Above 45 years	27	6.6%
Education Level	High School	96	23.3%
	Bachelor	232	56.3%
	Master	68	16.5%
	Doctoral	16	3.9%
Mobile Banking Usage Frequency	Less than 3 times per week	102	24.8%
	3–5 times per week	165	40.0%
	More than 5 times per week	145	35.2%

According to the demographic data, the majority of respondents (43.2%) are between the ages of 26 and 35, suggesting that young people who are active on the internet use mobile banking services extensively. The majority of respondents (56.3%) have a bachelor’s degree, indicating that those who use mobile banking typically have comparatively high levels of education and computer competence.

Table 2. Validity and Reliability Test

Variable	Item	Correlation Coefficient	Cronbach Alpha
Digital Happiness	DH1	0.712	0.842
	DH2	0.746	
	DH3	0.703	
Ease of Access	EA1	0.734	0.856
	EA2	0.768	
	EA3	0.715	
Transaction Security	TS1	0.721	0.838
	TS2	0.754	
	TS3	0.732	
Feature Innovation	FI1	0.708	0.847
	FI2	0.739	
	FI3	0.764	
Digital Loyalty	DL1	0.742	0.861
	DL2	0.758	
	DL3	0.776	

An item is considered valid when the correlation coefficient exceeds the minimum threshold of 0.30. According to Table 2, all measurement indicators show correlation values greater than 0.30, indicating that the questionnaire items are valid and suitable for further statistical analysis. Cronbach’s Alpha was used in reliability testing to evaluate the measurement items’ internal consistency. Acceptable reliability is indicated by a Cronbach’s Alpha value greater than 0.70. Table 3’s reliability test findings show that every variable in the study has a Cronbach’s Alpha value higher than the necessary cutoff, proving the validity of the measuring tools.

Table 3. Descriptive Statistics

Variable	Mean	Std. Deviation
Digital Happiness	3.87	0.68
Ease of Access	3.92	0.64
Transaction Security	3.85	0.71
Feature Innovation	3.79	0.66
Digital Loyalty	3.90	0.69

The descriptive statistics in Table 3 show that all variables have mean values above 3.5, indicating generally positive user perceptions of mobile banking services. Ease of access records the highest mean (3.92), followed by digital loyalty (3.90) and digital happiness (3.87), while transaction security (3.85) and feature innovation (3.79) also remain at favorable levels. The relatively moderate standard deviations (ranging from 0.64 to 0.71) suggest that responses are fairly consistent, reflecting a stable evaluation among users across all measured dimensions.

Table 4. Correlation Matrix

Variable	DH	EA	TS	FI	DL
Digital Happiness (DH)	1				
Ease of Access (EA)	0.51	1			
Transaction Security (TS)	0.47	0.49	1		
Feature Innovation (FI)	0.45	0.52	0.48	1	
Digital Loyalty (DL)	0.61	0.58	0.54	0.56	1

The correlation results in Table 4 indicate that all independent variables have positive correlations with digital loyalty, suggesting that improvements in digital happiness, ease of access, transaction security, and feature innovation are associated with higher levels of digital loyalty.

Table 5. Normality and Multicollinearity Test

Variable	Tolerance	VIF	Regression Residual
Digital Happiness	0.682	1.466	Sig= 0.087
Ease of Access	0.654	1.529	
Transaction Security	0.701	1.427	
Feature Innovation	0.673	1.485	

The Kolmogorov-Smirnov test was used to perform the normality test. Table 5 shows that the data have a normal distribution since the significance value is higher than 0.05. The multicollinearity test also shows that all VIF values are below 10, indicating that there is no multicollinearity problem in the regression model.

Table 6. Model Summary

Test	Result
R	0.712
R Square	0.507
Adjusted R-Square	0.502
Std. Error	0.662
F-Statistics	104.27
Sig.	0.000

Digital pleasure, ease of access, transaction security, and feature innovation account for 50.7% of the variation in digital loyalty, according to Table 6’s R Square value of 0.507. Other factors not covered in this study may have an impact on the remaining 49.3%. Table 6 shows that the regression model is statistically significant with a significance value of 0.000. This indicates that all of the independent factors have an impact on digital loyalty.

Table 7. Regression Coefficients

Variable	Unstandardized Coefficient (B)	Std. Error	t-statistic	Sig.
Constant	1.214	0.355	3.421	0.001
Digital Happiness (DH)	0.284	0.049	5.832	0.000
Ease of Access (EA)	0.241	0.049	4.917	0.000
Transaction Security (TS)	0.196	0.052	3.764	0.000
Feature Innovation (FI)	0.228	0.053	4.285	0.000

The regression equation can be written as follows: $DL = 1.214 + 0.284DH + 0.241EA + 0.196TS + 0.228FI$. Significance levels below 0.05 in Table 7's data show that every independent variable has a positive and substantial impact on digital loyalty. With a coefficient value of 0.284, digital happiness has the biggest impact on digital loyalty, followed by transaction security (0.196), feature innovation (0.228), and ease of access (0.241). The results show that all of the assumptions put forth are validated, indicating that among mobile banking customers, digital happiness, accessibility, transaction security, and innovative features have a major positive effect on digital loyalty.

5. Discussion

The findings of this study indicate that digital happiness, ease of access, transaction security, and feature innovation significantly influence digital loyalty among mobile banking users. Among these factors, digital happiness demonstrates the strongest effect, highlighting the importance of positive emotional experiences in sustaining long-term usage. Users who feel comfortable, satisfied, and enjoy their interactions with mobile banking applications are more likely to remain loyal to the platform (Garzaro et al., 2021). This aligns with prior research emphasizing that positive emotional responses enhance user engagement and strengthen long-term relationships with digital services. Furthermore, evidence from Christensen and Petersen (2017) and Cachero-Martínez et al. (2024) confirms that consumer happiness has a significant impact on loyalty, reinforcing the idea that emotional satisfaction is a key driver of continued usage behavior in digital environments.

In addition to emotional factors, ease of access plays a crucial role in shaping digital loyalty. Applications that are simple to use, easy to navigate, and consistently accessible improve user convenience and encourage repeated interactions. This suggests that intuitive interface design and efficient transaction processes are essential for maintaining long-term relationships between banks and their customers. Wilson et al. (2021) support this finding, showing that ease of use positively affects customer satisfaction, trust, and ultimately loyalty. Similarly, providing users with direct and effortless access to evaluate services enhances brand loyalty (Gupta et al., 2019; Habes et al., 2020). These findings imply that reducing complexity and improving usability can significantly strengthen user commitment to mobile banking platforms.

Transaction security is another key determinant of digital loyalty. Given the sensitivity of financial data, users are more likely to remain loyal to platforms that provide strong security systems and ensure the protection of personal and financial information. When users perceive that their transactions are secure, their trust in the platform increases, which in turn reinforces their loyalty. This is consistent with prior research indicating that perceived security positively influences trust and satisfaction, which subsequently drive loyalty behavior (Kim et al., 2010; Cui et al., 2015). Moreover, empirical evidence shows that perceived security significantly affects trust and loyalty in financial technology contexts, emphasizing the importance of secure digital environments in sustaining user relationships.

Feature innovation also contributes positively to digital loyalty. Mobile banking applications that continuously introduce useful and relevant features enhance user satisfaction and engagement by enabling more efficient financial activities. As a result, users perceive greater value in the application and are more likely to continue using it. This finding is supported by research showing that product innovation fosters positive word of mouth, which strengthens brand image and customer loyalty (Ferdiansyah et al., 2025). Additionally, innovative features have been found to increase user engagement and customer retention in digital platforms.

6. Conclusion

This study looks at how feature innovation, transaction security, ease of access, and digital pleasure affect mobile banking consumers' digital loyalty. The findings show that every independent variable significantly and favorably affects digital loyalty. Digital happiness has the biggest impact on these variables, indicating that consumers who are satisfied and feel good when using mobile banking apps are more likely to stick with the service.

Furthermore, innovative features, transaction security, and accessibility all contribute significantly to increasing user loyalty. User happiness and trust can be increased by mobile banking apps that are simple to use, offer safe transaction processes, and consistently provide cutting-edge features. Together, these elements support the development of enduring connections between consumers and online banking services. The study's conclusions have applications for financial technology companies and banks. Service providers should concentrate on enhancing user experience, bolstering security mechanisms, and consistently creating cutting-edge services in order to boost client loyalty.

This study is subject to several limitations. First, the use of a cross-sectional survey and self-reported data may limit the ability to establish causal relationships and may introduce response bias. Second, the application of purposive sampling and online data collection restricts the generalizability of the findings to broader populations of mobile banking users. To provide a more comprehensive knowledge of digital loyalty in the context of digital financial services, future studies may include other factors like perceived value, trust, or service quality.

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Data Disclosure Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.



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