
**Employee Loyalty to Mobile Banking: The Role of Social Influence,
Facilitating Condition, and Educational Level**

Hafrizal Okta Ade Putra¹, Rafdi Tomi Rafles², Rahmat³

¹Faculty of Economics and Business, Universitas Tamansiswa
Padang, Indonesia

²Faculty of Economics and Business, Universitas Tamansiswa
Padang, Indonesia

³Faculty of Economics and Business, Universitas Tamansiswa
Padang, Indonesia

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Abstract

This study aims to examine the effect of social influence and facilitating conditions on employee loyalty in using mobile banking services, with education level as a moderating variable. Using the Unified Theory of Acceptance and Use of Technology (UTAUT) framework, this research focuses on employees in Batam City, a dynamic industrial area with high technological adoption and a diverse workforce. The study employs a quantitative approach with data collected through structured questionnaires distributed to 273 employees who actively use mobile banking. The results show that social influence has a significant positive impact on mobile banking loyalty, particularly when employees are influenced by coworkers, friends, or family who also use the service. Facilitating conditions, such as receiving salaries through specific banks and ease of access to digital infrastructure, also positively affect loyalty. Furthermore, education level significantly moderates these relationships, where employees with higher educational attainment are more likely to critically evaluate social recommendations and effectively leverage available banking technologies. The findings highlight the importance of both social environment and supportive conditions in fostering mobile banking loyalty, especially among educated users in urban industrial settings.

Keywords: Mobile Banking, Social Influence, Facilitating Condition, User Loyalty, UTAUT, Education Level, Employees

1. Introduction

The rapid advancement of technology has significantly transformed the financial services industry, including the banking sector, enabling seamless transactions without geographical constraints (Friedman, 2016). In Indonesia, the adoption of digital banking services has become a strategic priority, with Bank Indonesia promoting secure and efficient payment systems through initiatives such as the Gerakan Nasional Non-Tunai (GNNT) (Rangkuti & Nasution, 2024).

Mobile banking, in particular, has emerged as one of the most widely adopted innovations, allowing users to conduct various financial transactions anytime and anywhere through smartphones. Statistical data from Bank Indonesia indicate that digital banking transactions reached IDR 15,148.71 trillion in the third quarter of 2023, growing by 12.83% year-on-year, while electronic money transactions increased by 10.34% year-on-year to IDR 116.54 trillion. This growth illustrates the shifting behaviour of consumers toward cashless solutions. However, despite this expansion, maintaining user loyalty remains a challenge for service providers, as users often have access to multiple banking applications or alternative financial platforms such as e-wallets, potentially reducing their commitment to a single mobile banking provider.

In the context of payroll-based banking services, many companies partner with banks to manage employee salaries, thereby encouraging account ownership and mobile banking usage. For employees, particularly those with limited time to visit physical bank branches, mobile banking offers substantial convenience in managing salaries, paying bills, transferring funds, and monitoring account balances. In cities with large working populations, such as Batam, home to more than 589,000 employees and a major industrial hub, mobile banking plays a crucial role in supporting daily financial activities.

User loyalty in mobile banking is influenced by various factors, among which social influence and facilitating conditions have been identified as particularly relevant. Social influence refers to the extent to which individuals perceive that important others, such as colleagues, friends, or family, expect them to use a specific technology. In urban work environments, peer behaviour and modern digital lifestyles can create indirect pressure to adopt and consistently use mobile banking, often associating it with technological competence and modernity (Castells, 2010). Facilitating conditions, on the other hand, relate to the availability of resources and infrastructure that support mobile banking usage, such as device compatibility, internet connectivity, and institutional support. For employees receiving regular salaries through a particular bank, this structural convenience can enhance loyalty by streamlining access to financial services within a single platform.

Additionally, education level may moderate the relationship between these factors and user loyalty. Employees with higher educational attainment may be better equipped to evaluate service benefits, adapt to technological features, and make rational decisions regarding mobile banking usage, while those with lower educational backgrounds may rely more heavily on social cues or ease of access in determining their loyalty. Given these dynamics, this study focuses on analyzing how social influence and facilitating conditions affect mobile banking loyalty among employees in Batam, and how education level moderates these relationships. This perspective not only contributes to the literature on digital banking adoption but also provides practical insights for financial institutions aiming to strengthen customer retention strategies.

2. Literature Review

2.1 Social Influence and Mobile Banking User Loyalty

Family members, friends, or colleagues believe they should use a particular system (Venkatesh et al., 2003). This concept integrates elements from subjective norms, social factors, and image within the Unified Theory of Acceptance and Use of Technology (UTAUT). In the context of mobile banking, social influence can manifest through direct recommendations, peer usage patterns, or societal perceptions associating technology adoption with competence and modernity.

In highly connected environments such as urban workplaces, social influence can create implicit pressure to adopt and maintain the use of mobile banking services. Castells (2010) emphasizes that digital lifestyle trends in urban societies often foster conformity to technological norms, while Surbakti (2009) notes that mobile banking usage is frequently associated with a modern and tech-savvy image. When individuals observe peers benefiting from the convenience and efficiency of mobile banking, they may be more likely to adopt the same services and remain loyal to them.

Empirical studies have confirmed the role of social influence in fostering continued usage and loyalty. For instance, Shankar et al. (2019) found that peer recommendations and social support significantly impact mobile banking loyalty, particularly in collectivist cultures where group norms strongly shape individual behaviour. Similarly, Alalwan et al. (2018) reported that social influence has a direct positive effect on mobile banking adoption and sustained engagement.

H1: Social influence has a positive and significant effect on employees' loyalty to mobile banking in Batam.

2.2 Facilitating Condition Mobile Banking User Loyalty

Facilitating conditions refer to the degree to which individuals believe that organizational and technical infrastructures exist to support system usage (Venkatesh et al., 2003). These include access to compatible devices, stable internet connectivity, adequate customer support, and institutional arrangements that simplify technology adoption.

In the mobile banking context, facilitating conditions encompass both technological resources and financial arrangements. For employees, receiving their salaries through a particular bank is a strong facilitating factor, as it reduces transactional barriers and centralizes financial activities within a single platform. This integration allows for seamless payment processing, account monitoring, and fund transfers, which can enhance user satisfaction and loyalty.

Chinomona and Dhurup (2014) found that facilitating conditions have a direct effect on technology use behaviour, which in turn influences loyalty. Similarly, Baabdullah et al. (2019) reported that facilitating conditions significantly contribute to mobile banking loyalty by

improving user experience and reducing perceived effort. The presence of strong facilitating conditions may not only encourage adoption but also sustain long-term engagement with the service.

H2: Facilitating Condition has a positive and significant effect on employees' loyalty to mobile banking in Batam.

2.3 The Moderating Role Educational Level

According to Tirtaharja & Lasulo (2005), higher educational attainment equips individuals with cognitive skills that enhance their ability to understand complex systems and adapt to technological changes. In the mobile banking context, education can influence both the weight of social influence and the perceived adequacy of facilitating conditions.

For social influence, individuals with higher education levels may be less dependent on external opinions, relying instead on independent evaluation of the technology's benefits. However, they may still value credible recommendations from trusted sources, particularly when such recommendations align with their own assessment (Alalwan et al., 2018). Conversely, individuals with lower education levels might rely more heavily on peer behaviour as a decision-making shortcut, amplifying the role of social influence in shaping loyalty.

H3: Education level moderates the effect of Social Influence on employees' loyalty to mobile banking in Batam.

For facilitating conditions, more educated individuals may recognize and utilize available resources more effectively, leveraging technical support and institutional arrangements to maximize benefits. Musa et al. (2021) found that education strengthens the relationship between facilitating conditions and technology adoption, suggesting that users with higher education are better equipped to capitalize on supportive infrastructures.

H4: Education level moderates the effect of Facilitating Condition on employees' loyalty to mobile banking in Batam.

3. Method

This study employed a quantitative research design, emphasizing hypothesis testing through the measurement of research variables using numerical data and statistical procedures. Given the causal nature of the research problem, the study aimed to examine cause and effect relationships between the independent variables Social Influence (SI) and Facilitating Conditions (FC) and the dependent variable, User Loyalty, with Education Level acting as a moderating variable. The research was conducted in Batam City, Riau Islands Province, Indonesia, as the location represents a major industrial hub with a high concentration of employees actively using mobile banking services. Data collection was carried out between June and July 2025. The target

population comprised all employees in Batam City who use mobile banking services. The sample was selected using purposive sampling, a non-probability sampling method. The minimum sample size was determined using the Cochran formula with a 95% confidence level, an estimated proportion of 0.5, and a 5% margin of error, resulting in 273 respondents.

Data were collected using a structured questionnaire comprising closed-ended questions measured on a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire items were adapted from established measurement scales in prior studies and modified to fit the research context. A five-point Likert scale was used to quantify respondents' agreement with each statement. The instrument measured perceptions related to Social Influence, Facilitating Conditions, User Loyalty, and Education Level.

Inferential statistical analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) via SmartPLS software 4.1.1.2. The analysis consisted of:

- 1) The study employed Partial Least Squares–Structural Equation Modelling (PLS-SEM) using SmartPLS software to test the research model.
- 2) Outer Model Testing: Assessed construct validity (convergent and discriminant validity) and reliability (Cronbach's Alpha and Composite Reliability).
- 3) Inner Model Testing: Evaluated path coefficients, the coefficient of determination (R^2), and the moderating effect of Education Level on the relationship between Social Influence, Facilitating Conditions, and User Loyalty.
- 4) Hypothesis testing was performed using bootstrapping with a significance level of 5% ($p < 0.05$).

4. Results

4.1 Descriptive Statistics

A total of 273 valid responses were analysed. The majority of respondents were aged between 25 and 40 years (61.5%), predominantly male (54.2%), and most held a bachelor's degree (52.7%). Regarding mobile banking usage, 68.1% reported daily use, primarily for salary checks, bill payments, and fund transfers. The descriptive analysis of the constructs indicated that both Social Influence (mean = 4.21, TCR = 84.2%) and Facilitating Conditions (mean = 4.15, TCR = 83.0%) were rated as "Good" according to Sekaran & Bougie's (2016) criteria. *User Loyalty* achieved a mean of 4.18 (TCR = 83.6%), reflecting high commitment levels among users.

4.2 Outer Model Evaluation

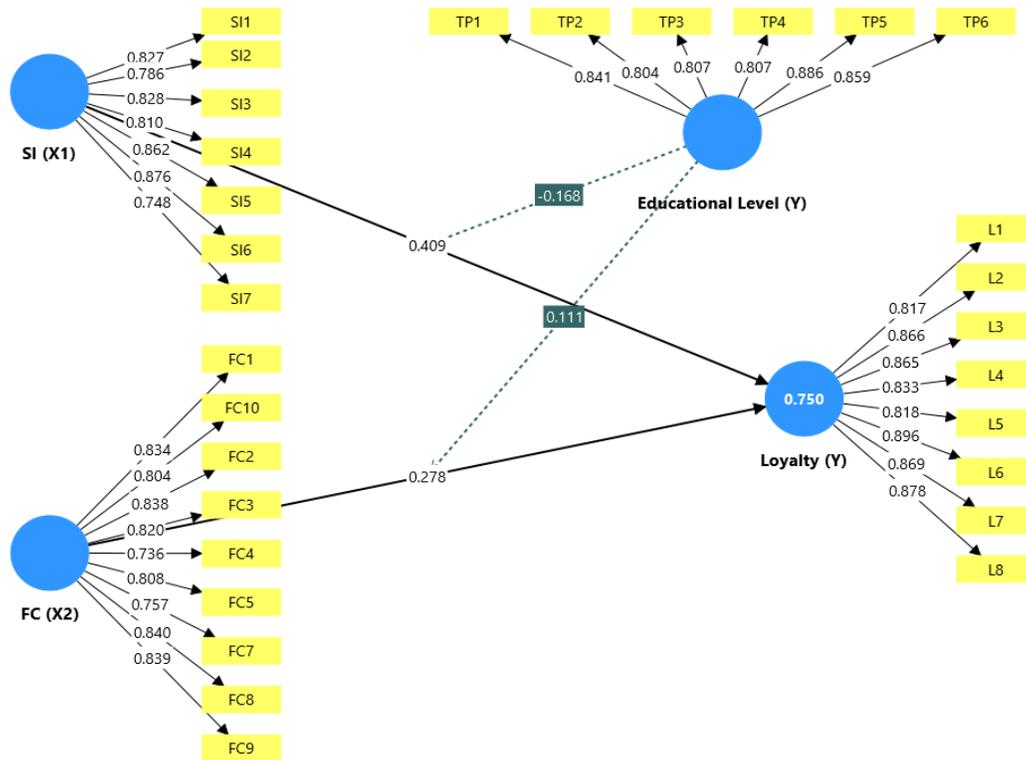


Fig. Outer Loading Test Result

Convergent validity reflects the degree to which multiple items intended to measure the same construct are indeed correlated. Based on the diagram, all outer loading values for the indicators are above the threshold of 0.70, which indicates that each indicator meets the criterion for convergent validity. According to Hair et al. (2019), outer loadings greater than 0.70 demonstrate that the indicator shares a substantial proportion of variance with its corresponding latent construct, thereby confirming its validity in representing the intended construct. Consequently, all measurement items in this model can be regarded as valid indicators of their respective latent variables.

Variable	Average Variance Extracted (AVE)
Social Influence (X1)	0.673
Facilitating Condition (X2)	0.655
Educational Level (Z)	0.697
Loyalty (Y)	0.732

Table 1. AVE Test Result

As presented in Table 1, all Average Variance Extracted (AVE) values exceed the recommended threshold of 0.50, indicating that the constructs meet the criterion for convergent validity. According to Hair et al. (2019), an AVE value greater than 0.50 signifies that the latent construct explains more than half of the variance of its indicators, thereby confirming that the indicators have a good level of validity in representing their respective constructs.

Variable	Composite Reliability	Cronbach's Alpha
Social Influence (X1)	0.935	0.919
Facilitating Condition (X2)	0.945	0.934
Educational Level (Z)	0.932	0.913
Loyalty (Y)	0.956	0.948

Table 2. Reliability Test Result

As shown in Table 2, the composite reliability and Cronbach's alpha values for each construct exceed the threshold of 0.70. Referring to the rule of thumb, where both composite reliability and Cronbach's alpha values greater than 0.70 indicate adequate internal consistency, the data presented in the table can therefore be considered reliable.

4.3 Inner Model Evaluation

After the estimated model meets the criteria for validity, the next step is to conduct the structural model (inner model) assessment. The structural model evaluation is carried out by examining the R square (R^2) values, which serve as an indicator of the model's goodness-of-fit. The results of the R-square test show a value of 0.745. This indicates that performance expectancy, effort expectancy, and education level contribute to user loyalty by 74.5%.

4.4 Hypothesis Testing

Variable	Original Sample	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
Social Influence (X1) > Loyalty (Y)	0.409	0.409	0.067	6.073	0.000
Facilitating Condition (X2) > Loyalty (Y)	0.278	0.279	0.068	4.073	0,000
Social Influence (X1) x Educational Level (Z) > Loyalty (Y)	-0.168	-0.166	0.050	3.397	0,000
Facilitating Condition (X4) x Educational Level (Z) > Loyalty (Y)	0.111	0.110	0.045	2.468	0,007

Table 3. Path Coefficient Test Result

Based on Table 3, which presents the results of the relationships among constructs, it is shown that Social Influence has a positive and significant effect on Loyalty, with a parameter coefficient of 0.409 and significance level of 0.067 (p-value = 0.000). This finding is further supported by the T-statistic value of 6.073, which exceeds the critical T-table value (T-statistic $6.073 > T\text{-table } 1.64$). Therefore, the first hypothesis of this study is accepted.

Table 3 indicates that Facilitating Conditions have a positive and significant effect on Loyalty, with a parameter coefficient of 0.278 and a significance level of 0.068 (p-value = 0.000). This result is also supported by the T-statistic value of 4.073, which is greater than the critical T-table value (T-statistic $4.073 > T\text{-table } 1.64$). The second hypothesis of this study is accepted.

In addition, Table 3 shows that education level moderates the effect of Social Influence on Loyalty, with a significance level of 0.050 (p-value = 0.000) and a negative parameter coefficient of -0.168 , indicating that the higher the education level, the weaker the influence of Social Influence on Loyalty. This finding is further supported by the T-statistic value of 3.397, which exceeds the critical T-table value (T-statistic $3.397 > T\text{-table } 1.64$). Therefore, the third hypothesis of this study is also accepted.

Finally, based on Table 3, education level is found to moderate the effect of Facilitating Conditions on Loyalty, with a significance level of 0.045 (p-value = 0.007) and a positive parameter coefficient of 0.111, indicating that the higher the education level, the stronger the influence of Facilitating Conditions on Loyalty. This result is also supported by the T-statistic

value of 2.468, which is greater than the critical T-table value (T-statistic $2.468 > T\text{-table } 1.64$). Therefore, the fourth hypothesis of this study is accepted.

5. Discussion

5.1 Social influence has a positive and significant effect on employees' loyalty to mobile banking in Batam.

The empirical analysis confirms that Social Influence has a positive and statistically significant effect on Loyalty, with a parameter coefficient of 0.409 and a p-value of 0.000, meeting the significance threshold at the 0.067 level. The T-statistic of 6.073 exceeds the critical T-table value of 1.64, reinforcing the robustness of this finding. These results indicate that the perceptions, recommendations, and approval of significant individuals such as family members, close friends, supervisors, colleagues, and other influential figures substantially contribute to strengthening employees' loyalty toward mobile banking. When employees receive encouragement and endorsement from their social environment, their confidence, satisfaction, and willingness to use the technology increase. Furthermore, the prevalence of mobile banking usage within their immediate social circles reduces perceived complexity, enhances ease of use, and fosters habitual adoption.

The findings further reveal that positive social recognition and the perception of being accepted or valued within one's social group create a reinforcing effect that promotes long-term commitment to mobile banking. This outcome aligns with prior studies by Rahi et al. (2019) and Dewi and Santosa (2021), which underscore the pivotal role of social influence in technology adoption, particularly in collectivist cultural contexts such as Indonesia. In such environments, technology acceptance is often shaped by collective norms and the behaviours of trusted social networks. Consequently, when mobile banking adoption is socially endorsed and widely practised, it becomes more deeply embedded in users' routines, thereby sustaining loyalty over time.

5.2 Facilitating Condition has a positive and significant effect on employees' loyalty to mobile banking in Batam.

The empirical analysis demonstrates that Facilitating Conditions have a positive and statistically significant effect on Loyalty, with a parameter coefficient of 0.278 and a p-value of 0.000, indicating significance at the 0.068 level. The T-statistic value of 4.073 exceeds the critical T-table value of 1.64, confirming the robustness of the relationship. These findings indicate that ease of access, technical support, and the availability of adequate resources such as compatible hardware (e.g., smartphones) and reliable internet connectivity enable employees to continuously use mobile banking services anytime and anywhere. Furthermore, the availability of user guides, customer service assistance, technical experts, and other external support mechanisms ensures that employees encounter minimal operational difficulties, reducing the likelihood of switching to alternative applications.

In the specific context of employees receiving monthly salaries through a designated bank, mobile banking from that bank becomes an essential tool for financial control. Employees can monitor their income and salary details in real time, as well as manage their finances by checking balances, tracking transactions, executing transfers, paying bills, fulfilling household needs, and allocating funds for savings or investment. All of these activities can be carried out conveniently and efficiently within the mobile banking platform. These findings are consistent with Wibowo and Sobari (2021), who emphasize that strong technical and operational infrastructure encourages sustained and active mobile banking usage. Similarly, Chandra Dass and Gani (2023) found that the availability of network connectivity, compatible devices, user-friendly interfaces, and effective customer support collectively enhance user loyalty, accessibility, and engagement with mobile banking services.

5.3 Education level moderates the effect of Social Influence on employees' loyalty to mobile banking in Batam.

The statistical analysis confirms that education level moderates the relationship between Social Influence and Loyalty, with a significance value of 0.050 (p -value = 0.000) and a negative parameter coefficient of -0.168 . This indicates that as education level increases, the positive effect of Social Influence on Loyalty decreases. The T-statistic of 3.397 exceeds the critical T-table value of 1.64, affirming the significance of this moderating effect. These findings suggest that employees with higher education levels tend to rely more on personal experience rather than external recommendations in their decision-making processes. Given their stronger cognitive abilities, critical thinking skills, and rational approach, highly educated employees are less susceptible to external influences, including those from peers, colleagues, or family, when deciding to adopt or remain loyal to technologies such as mobile banking.

Moreover, higher education appears to foster behavioural autonomy, in which individuals adopt and sustain technology use based on internal evaluations rather than social approval. Consequently, loyalty among highly educated employees is more strongly driven by self-assessed utility and direct user experience, while employees with medium to lower education levels tend to be more sensitive to social opinions, endorsements, and recommendations from their surrounding environment. These results are consistent with Hanafizadeh et al. (2014), who found that social influence exerts a stronger effect among users with lower to medium education levels, whereas highly educated users are more influenced by perceived usefulness and independent usage experiences, with minimal reliance on external social pressures.

5.4 Facilitating Condition moderates the effect of Social Influence on employees' loyalty to mobile banking in Batam.

The statistical analysis confirms that education level moderates the relationship between Facilitating Conditions and Loyalty, with a significance value of 0.045 (p -value = 0.007) and a positive parameter coefficient of 0.111. This indicates that as education level increases, the positive effect of Facilitating Conditions on Loyalty also becomes stronger. The T-statistic value

of 2.468 exceeds the critical T-table value of 1.64, supporting the significance of this moderating effect. These results suggest that Facilitating Conditions, such as training programs, technical support, and adequate infrastructure, are more effective in enhancing loyalty among users with higher levels of knowledge and comprehension. Employees with higher education levels are generally more adept at understanding and leveraging technological resources (e.g., internet connectivity, customer support, and user tutorials) provided by mobile banking service providers. Consequently, when organizations offer such support and resources, highly educated users are more likely to respond positively, integrating mobile banking into their financial routines and maintaining long-term usage.

In contrast, for users with lower education levels, Facilitating Conditions may be perceived merely as a basic requirement that enables usage, whereas highly educated users regard them as a strategic value-added factor and a differentiator in service quality. In the context of Batam City, where many employees are exposed to technology and modern workplace demands, education serves as a critical factor that transforms organizational support into user trust, ultimately fostering loyalty toward mobile banking.

These findings are consistent with Marakarkandy et al. (2017), who demonstrated that education strengthens the effect of Facilitating Conditions on loyalty because highly educated users are better equipped to maximise the benefits of technical and social support offered by digital banking. Similarly, Amoroso and Lim (2017) found that users with higher education levels are more sensitive to the quality of technological infrastructure and organizational support, which in turn reinforces their loyalty toward technological systems, including mobile banking.

6. Conclusion

This study provides empirical evidence that both social influence and facilitating conditions significantly enhance employee loyalty toward mobile banking services, while education level plays a nuanced moderating role in these relationships. The results demonstrate that social influence, particularly from colleagues, family, and close social circles, fosters a sense of trust, reduces perceived complexity, and promotes habitual usage, thereby strengthening loyalty. Facilitating conditions, including the availability of compatible devices, stable internet connectivity, institutional arrangements such as payroll integration, and responsive customer support, further contribute to sustained engagement with mobile banking platforms.

However, the moderating effects of education level reveal a differentiated behavioural pattern. While higher education attenuates the impact of social influence, indicating greater reliance on personal judgment and independent evaluation it amplifies the effect of facilitating conditions, suggesting that more educated users are better able to leverage available infrastructure and support to maximise benefits. These findings not only extend the theoretical understanding of the Unified Theory of Acceptance and Use of Technology (UTAUT) in the context of loyalty but also offer practical implications for financial institutions. Strategies aimed at enhancing loyalty should be tailored to user segments, emphasizing social endorsement and peer influence for less-

educated users, while focusing on advanced functionalities, technical resources, and service quality improvements for more-educated users.

By highlighting the interplay between social dynamics, infrastructural support, and educational background, this research contributes to both scholarly discourse and managerial practice in digital banking adoption. Future studies could expand the model by incorporating additional moderating variables such as digital literacy or cultural orientation, and by applying longitudinal designs to capture evolving loyalty behaviours in an increasingly competitive fintech landscape.

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