

User Experience, Trust, and Service Usage Breadth as Determinants of Customer Satisfaction in Mobile Banking: A Mediation Analysis

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Article History: Received on 2 July 2026, Revised on 23 July 2026,
Published on 5 August 2026

Abstract: This study examines the mediating role of Breadth of Service Usage in the relationships between User Experience, User Trust, and Customer Satisfaction in the context of the Sumut Mobile application, a regional digital banking platform in Indonesia. Digital banking has become increasingly important in supporting financial inclusion; however, customer satisfaction depends on both the quality of users' experiences and their trust in the digital banking system. Employing a quantitative associative research design, data were collected from 100 active users of the Sumut Mobile application through purposive sampling. The data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with SmartPLS version 4.1.4. The findings reveal that User Experience significantly influences Breadth of Service Usage ($t = 3.823$, $p < 0.001$) and Customer Satisfaction ($t = 3.242$, $p = 0.009$). Similarly, User Trust significantly affects Breadth of Service Usage ($t = 5.996$, $p < 0.001$) and Customer Satisfaction ($t = 2.381$, $p = 0.017$). Furthermore, Breadth of Service Usage significantly mediates the effects of User Experience ($t = 3.417$, $p = 0.006$) and User Trust ($t = 3.521$, $p = 0.008$) on Customer Satisfaction. These findings extend the Technology Acceptance Model literature by demonstrating that Breadth of Service Usage serves as an important mechanism through which positive user experiences and trust are translated into higher customer satisfaction. Practically, regional banks should improve user-interface design, strengthen perceptions of security and reliability, and encourage customers to utilize a broader range of digital banking features to enhance satisfaction and long-term loyalty.

Keywords: Breadth of Service Usage, Customer Satisfaction, Mobile Banking, User Experience, User Trust

A. Introduction

The digital transformation of the banking industry has fundamentally changed the way customers interact with financial services. Digital banking has become an essential component of modern financial transactions, requiring high levels of convenience, speed, and reliability. One of these innovations is the Sumut Mobile application developed by Bank Sumut, which provides integrated digital banking services designed to facilitate financial transactions for the people of North Sumatra.

However, the successful adoption of digital banking depends not only on the availability of advanced technological features but also on users' experiences with the application and their trust in the security and reliability of the system (Apaua & Lallie, 2025; Suardana & Mahyuni, 2024).

In practice, customer satisfaction with the Sumut Mobile application continues to face several challenges, as reflected in user reviews, feature utilization rates, and reports of service-related complaints. From the perspective of User Experience (UX), users have reported several issues, including an interface perceived as insufficiently intuitive, slow loading times for certain features, and difficulties in navigating transaction menus. These concerns indicate that the application's design has not yet fully met users' expectations for contemporary digital banking services, potentially reducing positive perceptions of the platform (Wulandari et al., 2024; Lemon & Verhoef, 2016; Verkijika, 2020).

Beyond user experience, customer trust remains another critical challenge. Concerns regarding transaction security, data privacy, and system reliability may discourage customers from fully adopting digital banking services and limit their willingness to engage with a wider range of application features. Since financial transactions involve sensitive personal and financial information, both positive user experiences and strong user trust are essential prerequisites for achieving higher levels of customer satisfaction (Che et al., 2023; Gefen et al., 2003).

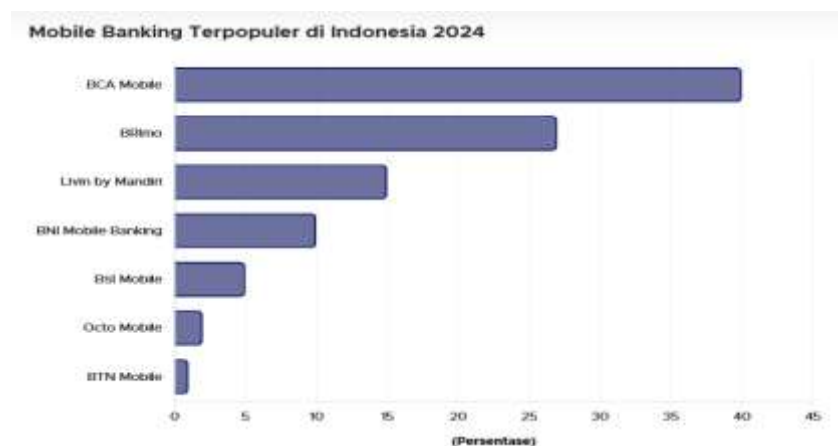


Figure 1. Popular Mobile Banking Application Ratings
(<https://data.goodstats.id>)

As illustrated in Figure 1, BCA Mobile remains the most widely used mobile banking application in Indonesia, accounting for approximately 40% of users. It is followed by BRImo, the mobile banking application of Bank BRI, with a market share of more than 25%, while the remaining users are distributed among other mobile banking applications. The rapid growth of mobile banking in Indonesia has intensified competition among banks to provide innovative features and greater value to

customers. Consequently, users increasingly evaluate digital banking applications based on the quality of their service features, including account information access, fund transfers, and bill payment services (Ramadhanty & Faturohman, 2024; Xiaolin et al., 2024).

User Experience (UX) has become a critical component of digital applications because it encompasses users' perceptions of ease of use, interface convenience, system responsiveness, and the overall quality of their interactions with the application. A positive user experience not only enhances customer satisfaction but also strengthens customer loyalty toward digital banking services. The preliminary survey conducted in this study indicates that although the Sumut Mobile application adequately fulfills customers' basic banking needs, improvements in system performance, navigation, and overall usability remain necessary to enhance customer satisfaction and strengthen the application's competitiveness relative to other mobile banking platforms. These findings suggest that delivering a positive user experience remains an important challenge for regional digital banking services (Sudirjo, Dewa, et al., 2024; Novianti et al., 2024).

In addition to User Experience, User Trust represents another important determinant of customer satisfaction with the Sumut Mobile application. Users continue to express concerns regarding system reliability and security, including unexpected account logouts, failures in one-time password (OTP) verification, and potential risks associated with personal data breaches. Within the context of digital financial services, trust constitutes a fundamental factor influencing customers' willingness to continue using digital banking applications. When trust is compromised, users are generally less inclined to fully adopt digital financial services (Che et al., 2023; Altay & Yapraklı, 2024).

Customers evaluate mobile banking applications not only in terms of convenience, usability, and interface design but also by comparing their experiences with competing banking applications. Therefore, although Sumut Mobile has successfully attracted new users through its digital features and ease of adoption, further improvements are required, particularly in strengthening perceived security and enhancing the overall user experience relative to competing applications. Such improvements are essential for achieving higher levels of customer satisfaction.

Greater utilization of available service features reflects stronger customer engagement and a higher perceived value of the application. The preliminary survey examining the Breadth of Service Usage revealed that, although the Sumut Mobile application provides a wide range of digital banking services, most customers primarily use basic features such as balance inquiries and fund transfers, while more advanced services including digital purchases, investment products, and additional payment services remain underutilized. Consequently, customers' overall utilization of the application remains limited, restricting the potential benefits they derive from the available digital

services and ultimately constraining customer satisfaction (Natsir et al., 2023) (Islam et al., 2023).

Understanding customer satisfaction is therefore essential for evaluating service quality and ensuring the long-term sustainability of digital banking services. Based on the preliminary survey findings and customer reviews collected during this study, it can be concluded that the quality of Bank Sumut's mobile banking services still requires improvement, as indicated by the declining level of customer satisfaction (Wiryanawan et al., 2023). Furthermore, the Breadth of Service Usage (extent of use) variable demonstrates that not all customers take advantage of the complete range of services available within the Sumut Mobile application. Most users rely primarily on core banking functions, such as balance inquiries, interbank transfers, and bill payments, whereas additional services including digital account opening, loan applications, and investment features are rarely utilized. This limited utilization suggests that the application has not yet fully encouraged comprehensive customer engagement. Accordingly, the breadth of service usage may represent an important mechanism through which positive user experiences and trust translate into higher customer satisfaction. The Breadth of Service Usage serves as a mediating variable linking User Experience and User Trust to Customer Satisfaction. Customers who experience positive interactions with the application and develop confidence in its reliability are more likely to utilize a broader range of banking services, including interbank transfers, digital payments, and online purchases. As customers engage with a wider variety of services, both the intensity and depth of application usage increase, thereby enhancing their overall satisfaction with the digital banking experience.

This study integrates three complementary theoretical perspectives to explain customer satisfaction in digital banking. The Technology Acceptance Model (TAM) suggests that positive user experiences encourage technology adoption through perceived usefulness and perceived ease of use (Davis, 1989). Trust theory emphasizes that users' confidence in system security and reliability reduces perceived uncertainty and strengthens their willingness to continue using digital financial services (Gefen et al., 2003). Furthermore, the service usage literature argues that customers derive greater value from digital platforms when they utilize a broader range of available services, thereby increasing customer satisfaction (Burton-Jones & Straub, 2006). Accordingly, this study proposes that Breadth of Service Usage functions as a behavioral mechanism through which User Experience and User Trust influence Customer Satisfaction.

Although previous studies (Davis, 1989; Bhattacharjee, 2001; Venkatesh & Davis, 2000) have consistently demonstrated that User Experience and User Trust significantly influence technology acceptance and user satisfaction, several important research gaps remain. First, previous studies have predominantly focused on the direct relationships between User Experience, User Trust, and Customer Satisfaction, while

limited attention has been given to the mediating role of Breadth of Service Usage. Second, empirical evidence regarding this mediating mechanism remains scarce, particularly in the context of regional banking applications operating in emerging markets. Third, most existing studies have examined large commercial banks, whereas evidence from regional development banks, such as Bank Sumut, remains limited. Addressing these gaps, this study investigates the extent to which Breadth of Service Usage mediates the relationships between User Experience, User Trust, and Customer Satisfaction in the Sumut Mobile application. The findings are expected to provide both theoretical contributions to digital banking adoption research and practical recommendations for strengthening Bank Sumut's digital banking strategy (Che et al., 2023).

Overall, these phenomena reveal a clear gap between customer expectations and their actual experiences when using the Sumut Mobile application. The persistence of customer complaints indicates that continuous improvements in mobile banking services are necessary to ensure that digital banking functions operate effectively and deliver superior service quality. Therefore, this study aims to examine the direct effects of User Experience and User Trust on Customer Satisfaction and to determine whether Breadth of Service Usage functions as a mediating mechanism that strengthens these relationships within the context of the Sumut Mobile application (Apaua & Lallie, 2025) (Alsmadi et al., 2022).

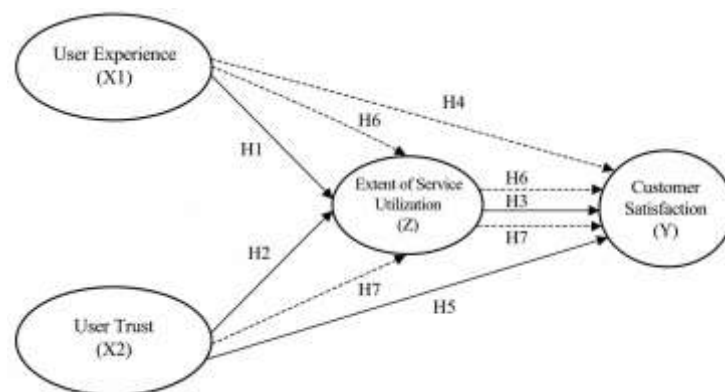


Figure 1. Conceptual Framework

B. Methods

This study employed a quantitative research method using both descriptive and causal approaches. The descriptive approach was adopted to provide a systematic overview of the mediating role of Breadth of Service Usage in the relationship between User Experience, User Trust, and Customer Satisfaction among users of the Sumut Mobile application. Through quantitative data analysis, the study sought to identify patterns of relationships among the research variables based on information collected from the respondents (Aqilah & Fathoni, 2023a).

The causal approach was applied to examine the cause-and-effect relationships between the independent variables, namely User Experience (X_1) and User Trust (X_2), and the dependent variable, Customer Satisfaction (Y), with Breadth of Service Usage (Z) serving as the intervening variable (Qonita & Puspawati, 2026).

The population of this study consisted of all active users of the Sumut Mobile application in 2024, totaling 476,893 customers. The sampling technique employed was purposive sampling, whereby respondents were selected based on specific criteria, namely active users who had experience using the Sumut Mobile application and were able to evaluate its digital banking services. The sample size was determined using the Slovin formula with a 10% margin of error, resulting in a total of 100 respondents (Aqilah & Fathoni, 2023).

Primary data were collected through a structured questionnaire using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The questionnaire consisted of measurement items representing the four research constructs: User Experience, User Trust, Breadth of Service Usage, and Customer Satisfaction. The measurement indicators were adapted from established literature on technology acceptance, digital banking, and customer satisfaction and were adjusted to fit the context of the Sumut Mobile application. The adequacy of the measurement instrument was subsequently evaluated through validity and reliability testing within the PLS-SEM measurement model (Handayani, 2023a).

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (PLS-SEM) with SmartPLS version 4.1.4 following the recommended two-stage evaluation procedure. The first stage assessed the measurement model (outer model) by examining indicator reliability through outer loadings (> 0.70), internal consistency reliability using Cronbach's Alpha and Composite Reliability (> 0.70), and convergent validity using the Average Variance Extracted ($AVE > 0.50$). The second stage evaluated the structural model (inner model) by examining the coefficient of determination (R^2), predictive relevance ($Q^2 > 0$), model fit using the Standardized Root Mean Square Residual ($SRMR < 0.10$), and the significance of the hypothesized relationships through the bootstrapping procedure based on path coefficients, t -statistics (> 1.96), and p -values (< 0.05) (Wardani et al., 2026).

C. Results of the Discussion

1. Results

At the outer model evaluation stage, convergent validity was assessed by examining the outer loading values of each indicator, with values above 0.70 considered acceptable. The results showed that all indicators measuring User Experience (X_1), User Trust (X_2), Breadth of Service Usage (Z), and Customer Satisfaction (Y) exceeded the recommended threshold, indicating satisfactory convergent validity. In addition,

all questionnaire items demonstrated significant correlations with their respective constructs, confirming the validity and reliability of the measurement instrument. Therefore, all constructs met the required statistical criteria and were considered suitable for subsequent structural model analysis.

Table 1. Convergent Validity Test Based on Outer Loadings

Indicator	User Experience (X ₁)	User Trust (X ₂)	Breadth of Service Usage (Z)	Customer Satisfaction (Y)
1	0.868	0.801	0.928	0.902
2	0.847	0.826	0.892	0.930
3	0.807	0.837	0.902	0.930
4	0.780	0.890	0.838	0.869
5	0.887	0.891	0.805	0.905

Source: SmartPLS Version 4.1.4 Output (2025).

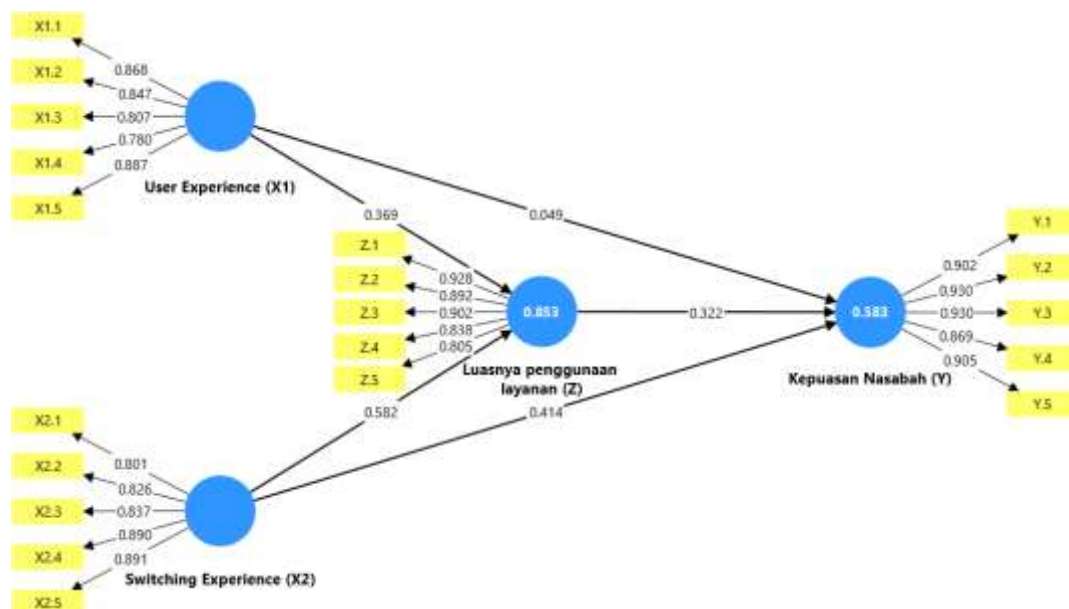


Figure 2. Outer Loading Test

Source: SmartPLS Version 4.1.4 Output (2025)

The Average Variance Extracted (AVE) test was subsequently performed to evaluate the extent to which the indicators of each latent construct explained the variance of their corresponding variables. AVE is a measure of convergent validity, where higher AVE values indicate greater consistency among the indicators in representing their respective latent constructs. A construct is considered to demonstrate satisfactory convergent validity when its AVE exceeds 0.50, indicating that more than 50% of the variance in the observed indicators is explained by the underlying latent construct.

Table 2. Convergent Validity Test Based on Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)
Customer Satisfaction	0.824
Breadth of Service Usage	0.764
User Trust	0.722
User Experience	0.704

Source: SmartPLS Version 4.1.4 Output (2025)

As presented in Table 2, all latent variables User Experience, User Trust, Breadth of Service Usage, and Customer Satisfaction obtained AVE values greater than 0.50. These results indicate that all constructs satisfy the criterion for convergent validity, confirming that the measurement indicators adequately represent their respective latent variables.

Reliability Test

The reliability test was conducted to evaluate the internal consistency of the measurement indicators within each latent construct. A construct is considered reliable when both Cronbach's Alpha and Composite Reliability exceed the recommended threshold of 0.70. The results of the reliability assessment are presented below.

Table 3. Construct Reliability and Validity

Variable	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
Customer Satisfaction	0.946	0.947	0.959	0.824
Breadth of Service Usage	0.922	0.922	0.942	0.764
User Trust	0.903	0.906	0.928	0.722
User Experience	0.894	0.896	0.922	0.704

Source: SmartPLS Version 4.1.4 Output (2025).

The results presented in Table 3 demonstrate that all constructs achieved Cronbach's Alpha and Composite Reliability values greater than 0.70. Therefore, all latent variables are considered reliable, indicating that the measurement indicators consistently and accurately represent their respective constructs. After confirming that the measurement model (outer model) satisfies the required standards of validity and reliability, the analysis proceeded to the evaluation of the structural model (inner model). This stage aims to examine the structural relationships among the latent variables and to test the research hypotheses proposed in the conceptual framework.

Inner Model (Structural Model) Evaluation

Table 4. R-Square and Adjusted R-Square Values

Variable	R ²	Adjusted R ²
Customer Satisfaction	0.583	0.570
Breadth of Service Usage	0.853	0.850

Source: SmartPLS Version 4.1.4 Output (2025).

The coefficient of determination (R^2) was used to evaluate the explanatory power of the structural model. As presented in Table 6, the R^2 value for Breadth of Service Usage is 0.853, indicating that 85.3% of the variance in Breadth of Service Usage is explained by the independent variables, namely User Experience and User Trust. The remaining 14.7% of the variance is attributable to factors not included in the present study. Meanwhile, the R^2 value for Customer Satisfaction is 0.583, indicating that 58.3% of the variance in Customer Satisfaction is explained by User Experience, User Trust, and Breadth of Service Usage. The remaining 41.7% is explained by other variables beyond the scope of this study. The overall model fit was assessed using the Standardized Root Mean Square Residual (SRMR). A structural model is considered acceptable when the SRMR value is less than 0.10.

Table 5. Model Fit Assessment

Index	Saturated Model	Estimated Model
SRMR	0.085	0.085

Source: SmartPLS Version 4.1.4 Output (2025).

As shown in Table 5, the SRMR value is 0.085, which is below the recommended threshold of 0.10. Therefore, the proposed structural model demonstrates an acceptable level of model fit and is appropriate for hypothesis testing. The Predictive Relevance (Q^2) test was conducted to evaluate the predictive capability of the structural model. A model is considered to possess predictive relevance when the Q^2 value is greater than zero ($Q^2 > 0$). Conversely, a Q^2 value equal to or below zero indicates that the model lacks predictive relevance.

Table 6. Q^2 Predict Results

Variable	Q^2 Predict	Interpretation
Customer Satisfaction	0.549	Predictively Relevant
Breadth of Service Usage	0.847	Predictively Relevant

Source: SmartPLS Version 4.1.4 Output (2025)

The results presented in Table 6 indicate that Customer Satisfaction achieved a Q^2 value of 0.549, whereas Breadth of Service Usage obtained a Q^2 value of 0.847. Since both values exceed zero, the structural model demonstrates satisfactory predictive

relevance for both endogenous constructs, confirming that the model has adequate predictive capability.

Hypothesis Testing

Table 7. Results of the Direct Effect Hypothesis Testing

Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t-Statistics (O/STDEV)	p-Value
Breadth of Service Usage → Customer Satisfaction	0.322	0.305	0.203	2.582	0.004
User Trust → Customer Satisfaction	0.414	0.426	0.174	2.381	0.017
User Trust → Breadth of Service Usage	0.582	0.575	0.097	5.996	0.000
User Experience → Customer Satisfaction	0.349	0.352	0.204	3.242	0.009
User Experience → Breadth of Service Usage	0.369	0.377	0.097	3.823	0.000

Source: SmartPLS Version 4.1.4 Output (2025).

Table 7 presents the results of the direct effect hypothesis testing, which are summarized as follows:

1. Effect of Breadth of Service Usage on Customer Satisfaction
Breadth of Service Usage has a positive and statistically significant effect on Customer Satisfaction, with a path coefficient of 0.322, a *t*-statistic of 2.582 (> 1.96), and a *p*-value of 0.004 (< 0.05). Therefore, Hypothesis 1 is supported.
2. Effect of User Trust on Customer Satisfaction
User Trust has a positive and statistically significant effect on Customer Satisfaction, with a path coefficient of 0.414, a *t*-statistic of 2.381 (> 1.96), and a *p*-value of 0.017 (< 0.05). Therefore, Hypothesis 2 is supported.
3. Effect of User Trust on Breadth of Service Usage
User Trust has a positive and statistically significant effect on Breadth of Service Usage, with a path coefficient of 0.582, a *t*-statistic of 5.996 (> 1.96), and a *p*-value of 0.000 (< 0.05). Therefore, Hypothesis 3 is supported.
4. Effect of User Experience on Customer Satisfaction
User Experience has a positive and statistically significant effect on Customer Satisfaction, with a path coefficient of 0.349, a *t*-statistic of 3.242 (> 1.96), and a *p*-value of 0.009 (< 0.05). Therefore, Hypothesis 4 is supported.
5. Effect of User Experience on Breadth of Service Usage
User Experience has a positive and statistically significant effect on Breadth of Service Usage, with a path coefficient of 0.369, a *t*-statistic of 3.823 (> 1.96), and a *p*-value of 0.000 (< 0.05). Therefore, Hypothesis 5 is supported.

Indirect Effect Hypothesis Testing

Table 8. Results of the Indirect Effect Hypothesis Testing

Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	<i>t</i> -Statistics (O/STDEV)	<i>p</i> -Value
User Trust → Breadth of Service Usage → Customer Satisfaction	0.387	0.175	0.123	3.521	0.008
User Experience → Breadth of Service Usage → Customer Satisfaction	0.319	0.115	0.084	3.417	0.006

Source: SmartPLS Version 4.1.4 Output (2025).

Table 8 presents the results of the indirect effect hypothesis testing, as summarized below:

1. Indirect Effect of User Trust on Customer Satisfaction through Breadth of Service Usage
User Trust has a positive and statistically significant indirect effect on Customer Satisfaction through Breadth of Service Usage, with a path coefficient of 0.387, a *t*-statistic of 3.521 (> 1.96), and a *p*-value of 0.008 (< 0.05). These findings indicate that Breadth of Service Usage significantly mediates the relationship between User Trust and Customer Satisfaction. Therefore, Hypothesis 6 is supported.
2. Indirect Effect of User Experience on Customer Satisfaction through Breadth of Service Usage
User Experience has a positive and statistically significant indirect effect on Customer Satisfaction through Breadth of Service Usage, with a path coefficient of 0.319, a *t*-statistic of 3.417 (> 1.96), and a *p*-value of 0.006 (< 0.05). These findings demonstrate that Breadth of Service Usage significantly mediates the relationship between User Experience and Customer Satisfaction. Therefore, Hypothesis 7 is supported.

2. Discussion

Effect of User Experience on Breadth of Service Usage

The findings indicate that User Experience has a positive and statistically significant effect on Breadth of Service Usage ($t = 3.823$, $p < 0.001$). This finding suggests that a more positive user experience encourages customers to utilize a wider range of services offered by the application. In other words, factors such as intuitive navigation, an attractive user interface, ease of use, and system responsiveness motivate customers to explore and use more digital banking features available through the Sumut Mobile application. This result is consistent with the Technology Acceptance Model (TAM), which posits that users who perceive a digital system as easy to use and useful are more likely to adopt and continuously utilize its available

functions (Davis, 1989). Recent empirical evidence also confirms that positive user experience significantly encourages customers to increase their utilization of mobile banking services because a user-friendly interface enhances engagement and exploration of digital features (Aqilah & Fathoni, 2023; Handayani, 2023). This finding is consistent with previous studies showing that a better user experience encourages users to interact more intensively with mobile banking features, thereby increasing the utilization of available digital services (Velika & Adnas, 2025; Sudirjo, Ekasari, et al., 2024).

Effect of User Trust on Breadth of Service Usage

User Trust also has a positive and statistically significant effect on Breadth of Service Usage ($t = 5.996$, $p < 0.001$). This result indicates that higher levels of trust in the application encourage customers to utilize a broader range of digital banking services. Customers who perceive the application as secure, reliable, and trustworthy are more willing to adopt additional features beyond basic banking transactions, thereby increasing the overall breadth of service usage (Sijabat, 2024).

Effect of Breadth of Service Usage on Customer Satisfaction

The findings further reveal that Breadth of Service Usage has a positive and statistically significant effect on Customer Satisfaction ($t = 2.582$, $p = 0.004$). This result suggests that customers who utilize a wider variety of banking services experience greater overall satisfaction with the application. The use of multiple features, including interbank transfers, bill payments, mobile top-ups, account information, and transaction history, enhances the efficiency, convenience, and perceived value of the digital banking experience (Beanning & Zulkarnain, 2024) (Tripuspitorini et al., 2025).

Effect of User Experience on Customer Satisfaction

The results indicate that User Experience has a positive and statistically significant effect on Customer Satisfaction ($t = 3.242$, $p = 0.009$). This finding demonstrates that improvements in user experience directly contribute to higher levels of customer satisfaction. Features such as intuitive navigation, attractive interface design, fast system performance, and seamless transaction processes play an important role in creating positive perceptions of Bank Sumut's digital banking services (Velika & Adnas, 2025).

Effect of User Trust on Customer Satisfaction

User Trust has a positive and statistically significant effect on Customer Satisfaction ($t = 2.381$, $p = 0.017$). This finding indicates that customers who perceive the Sumut Mobile application as secure, reliable, and dependable are more likely to be satisfied

with the digital banking services provided. Confidence in transaction security, data privacy, and system reliability strengthens users' willingness to continue using the application and contributes positively to their overall satisfaction (Ramadhanty & Faturohman, 2024).

Indirect Effect of User Experience on Customer Satisfaction through Breadth of Service Usage

The mediation analysis indicates that Breadth of Service Usage significantly mediates the relationship between User Experience and Customer Satisfaction ($t = 3.417$, $p = 0.006$). This finding suggests that a positive user experience not only directly enhances customer satisfaction but also encourages customers to utilize a broader range of digital banking services, which subsequently leads to higher overall satisfaction. Thus, improving user experience can indirectly strengthen customer satisfaction by promoting greater engagement with the application's features.

Indirect Effect of User Trust on Customer Satisfaction through Breadth of Service Usage

The results further demonstrate that Breadth of Service Usage significantly mediates the relationship between User Trust and Customer Satisfaction ($t = 3.521$, $p = 0.008$). This finding indicates that greater trust in the application motivates customers to make broader use of the services available within Sumut Mobile. As customers become more confident in the application's security and reliability, they are more likely to utilize additional digital banking features, resulting in higher levels of customer satisfaction.

Overall, the findings demonstrate that User Experience and User Trust positively and significantly influence both Breadth of Service Usage and Customer Satisfaction, either directly or indirectly through the proposed mediating relationship. These results are consistent with the Technology Acceptance Model (TAM), which posits that positive user experiences enhance perceived ease of use and perceived usefulness, thereby encouraging users to adopt and utilize technological innovations more extensively (Davis, 1989). Furthermore, higher levels of User Trust facilitate technology adoption by reducing users' perceived uncertainty and increasing their confidence in digital banking systems. Consequently, customers become more willing to explore a broader range of services within the Sumut Mobile application, ultimately leading to greater satisfaction with the digital banking experience (Jabbar & Hana, 2025).

D. Conclusion

Based on the research findings, this study conclusively establishes that user experience and user trust are pivotal determinants of customer satisfaction in digital

banking, both directly and indirectly through the mediating role of breadth of service usage. Directly, user experience positively and significantly influences both breadth of service usage and customer satisfaction, confirming that intuitive interface design, responsive system performance, and easy navigation encourage customers to adopt a wider range of services while simultaneously enhancing satisfaction. Similarly, user trust exerts a significant positive effect on both breadth of usage and satisfaction, underscoring that perceived security, reliability, and performance integrity drive broader adoption and elevate overall satisfaction. Importantly, breadth of service usage itself positively influences customer satisfaction, demonstrating that customers who engage with multiple features such as bill payments, digital purchases, and investment services experience higher satisfaction levels. Crucially, breadth of service usage significantly mediates the relationships between both user experience and trust on one hand, and customer satisfaction on the other, highlighting that excellent user experience and strong trust translate into satisfaction largely through encouraging extensive service utilization. These findings collectively establish a comprehensive model where experience and trust function as foundational drivers, while usage breadth serves as a critical mechanism translating these drivers into tangible satisfaction outcomes. Practically, Bank Sumut must prioritize continuous enhancement of user experience through interface modernization, system responsiveness, and simplified navigation, while simultaneously strengthening trust via robust transaction security, data privacy, and reliable customer support. Proactive strategies to broaden service usage including educational campaigns, in-app guidance, and promotional programs are essential to maximize satisfaction. Customer complaint resolution and system stability must remain top priorities to sustain long-term loyalty. For future research, it is recommended to expand the study population across different operational regions, include corporate customers and new users, and incorporate additional variables such as digital literacy, perceived value, or switching costs to build a more comprehensive model. Longitudinal designs would track how satisfaction evolves with continuous service improvements, while qualitative approaches could capture nuanced customer experiences and barriers to broader feature adoption, thereby informing more targeted digital banking strategies.

E. Acknowledgement

We thank all parties who supported us in this meaningful paper.

References

- Alsmadi, A. A., Shuhaiber, A., Alhawamdeh, L. N., Alghazzawi, R., & Al-Okaily, M. (2022). Twenty Years of Mobile Banking Services Development and Sustainability: A Bibliometric Analysis Overview (2000–2020). *Sustainability*, 14(17), 10630. <https://doi.org/10.3390/su141710630>

- Altay, S., & Yapraklı, T. Ş. (2024). The Relationship Among U-Constructs, Trust and Satisfaction: Evidence from Mobile Banking Users. *International Journal of Management Studies*, 31(1), 171–208. <https://doi.org/10.32890/ijms2024.31.1.7>
- Apaua, R., & Lallie, H. S. (2025a). Measuring User Perceived Security of Mobile Banking Applications. *Computers*, 14(4), 144. <https://doi.org/10.3390/computers14040144>
- Aqilah, S., & Fathoni, M. A. (2023a). Factors Determining the Use of Mobile Banking in Indonesia. *International Journal of Banking and Finance*, 18(2), 29–52. <https://doi.org/10.32890/ijbf2023.18.2.2>
- Beanning, L., & Zulkarnain. (2024). The effect of e-service quality on customer satisfaction and customer loyalty: A study on mobile banking application in Indonesia. *Communications in Humanities and Social Sciences*, 4(1), 51–58. <https://doi.org/10.21924/chss.4.1.2024.73>
- Che, M., Say, S. Y. A., Yu, H., Zhou, Q., Shu, J., Sun, W., Luo, X., & Xu, H. (2023). Investigating customers' continuous trust towards mobile banking apps. *Humanities and Social Sciences Communications*, 10(1), 960. <https://doi.org/10.1057/s41599-023-02483-3>
- Gefen, D., Karahanna, E., & Straub, D. W. (n.d.). *Trust and TAM in Online Shopping: An Integrated Model*. Retrieved July 23, 2026, from <https://dx.doi.org/10.2307/30036519>
- Handayani, W. P. P. (2023a). The UTAUT Implementation Model in Defining the Behavioral Intention of Mobile Banking Users. *Jurnal Manajemen Bisnis*, 14(2), 361–377. <https://doi.org/10.18196/mb.v14i2.18649>
- Islam, K. M. A., Islam, S., Karim, M. M., Haque, M. S., & Sultana, T. (2023). Relationship between e-service quality dimensions and online banking customer satisfaction. *Banks and Bank Systems*, 18(1), 174–183. [https://doi.org/10.21511/bbs.18\(1\).2023.15](https://doi.org/10.21511/bbs.18(1).2023.15)
- Jabbar, M. Q., & Hana, K. F. (2025). The Effect of Trust and Service Quality on BSI Mobile Banking User Satisfaction with Customer Loyalty As An Intervening Variable (Case Study Of Iain Kudus Students). *Islamic Economic and Business Journal*, 7(1), 1–15. <https://doi.org/10.30863/iebjournal.v7i1.9258>
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing*, 80(6), 69–96. <https://doi.org/10.1509/jm.15.0420>
- Natsir, K., Arifin, A. Z., Sadhewa, C. B., Aprilia, D., & Dharsono, S. (2023). Analysis of Digital Bank Services in Indonesia Based on Consumer Perception. *International Journal of Application on Economics and Business*, 1(1), 307–320. <https://doi.org/10.24912/ijaeb.v1i1.307-320>
- Novianti, E., Ahshyar, T. K., Syaifullah, S., & Fronita, M. (2024). Evaluation of User Experience of Mobile Banking Applications Using User Experience Method Questionnaire (UEQ) And Heuristic Evaluation (HE). *Jurnal Teknik Informatika (Jutif)*, 5(4), 133–139. <https://doi.org/10.52436/1.jutif.2024.5.4.2117>
- Qonita, L. A., & Puspawati, D. (2026). The Influence of Usability, Compatibility, and Social Influence on Mobile Banking Adoption in Indonesia: A Study on

- Generation X. *Inovasi Pembangunan: Jurnal Kelitbangan*, 14(1).
<https://doi.org/10.35450/jip.v14i1.1715>
- Ramadhanty, S. D., & Faturohman, T. (2024a). Satisfaction of mobile banking customers in Indonesia. *International Journal of Economic Policy in Emerging Economies*, 20(3-4), 255-264. <https://doi.org/10.1504/IJEPEE.2024.142470>
- Sijabat, R. (2024). Mobile Banking Adoption: The Role of Performance and Trust. *RISSET: Jurnal Aplikasi Ekonomi Akuntansi Dan Bisnis*, 6(2), 052-069. <https://doi.org/10.37641/riset.v6i2.2115>
- Suardana, I. W. A., & Mahyuni, L. P. (2024). How Ease of Use, Convenience, Risk, Trust, and Security Affect Mobile Banking Use via Satisfaction. *International Journal of Social Science and Business*, 8(3), 423-435. <https://doi.org/10.23887/ijssb.v8i3.83987>
- Sudirjo, F., Dewa, D. M. R. T., Kesuma, L. I., Suryaningsih, L., & Utami, E. Y. (2024). Application of The User Centered Design Method To Evaluate The Relationship Between User Experience, User Interface and Customer Satisfaction on Banking Mobile Application. *Jurnal Informasi Dan Teknologi*, 7-13. <https://doi.org/10.60083/jidt.v6i1.465>
- Sudirjo, F., Ekasari, S., Hendayani, N., Dharmawan, D., & Launtu, A. (2024). Application of The End User Computing Satisfaction Method to Analyze User Satisfaction Toward the Quality of Mobile Banking Services. *Jurnal Informasi Dan Teknologi*, 150-154. <https://doi.org/10.60083/jidt.v6i1.490>
- Triuspitorini, F. A., Rahmawati, D. A., & Ibtisamah, R. (2025). Drivers of Customer Satisfaction in Islamic Mobile Banking: An Analysis of Service Quality, Ease of Use, Trust, And Islamic Marketing Ethics in Indonesia. *EKSPANSI: Jurnal Ekonomi, Keuangan, Perbankan, Dan Akuntansi*, 17(1), 77-93. <https://doi.org/10.35313/ekspansi.v17i1.6791>
- Velika, Y., & Adnas, D. A. (2025a). The Impact of User Experience and Customer Satisfaction on Customer Loyalty in BCA Mobile Banking. *ZONAsi: Jurnal Sistem Informasi*, 7(2), 638-648. <https://doi.org/10.31849/mrhhdz04>
- Verkijika, S. F. (2020). An affective response model for understanding the acceptance of mobile payment systems. *Electronic Commerce Research and Applications*, 39, 100905. <https://doi.org/10.1016/j.elerap.2019.100905>
- Wardani, R. T. I., Astuti, E. S., Sunarti, & Iqbal, M. (2026). Explaining Post-Adoption Mobile Banking Usage in Indonesia Using an Integrated Technology Acceptance Model and IS Success Model: Evidence from PLS-SEM. *International Journal of Environment, Engineering and Education*, 8(1), 138-155. <https://doi.org/10.55151/ijeeedu.v8i1.372>
- Wiryanan, D., Suhartono, J., Hiererra, S. E., & Gui, A. (2023). Factors Affecting Digital Banking Customer Satisfaction in Indonesia. *International Journal of Application on Sciences, Technology and Engineering*, 1(1), 335-342. <https://doi.org/10.24912/ijaste.v1.i1.335-342>
- Wulandari, N., Jager, J. W. D., & Mahry, S. E. (2024). The Driving Factors of Digital Banking Intention and the Role of Customer Experience in Indonesia Banking

Industry. *Jurnal Administrasi Bisnis*, 13(1), 10–18.
<https://doi.org/10.14710/jab.v13i1.59623>

Xiaolin, S., Duraipandi, O., Yichuan, W., Zeyu, W., & Zhaoqing, W. (2024). Impact of Online-Banking and Mobile-Banking Applications in Influencing Customer Experience. *International Journal of Computational and Experimental Science and Engineering*, 10(4). <https://doi.org/10.22399/ijcesen.3736>