Analyzing the Determinants of User Satisfaction and Continuous Usage Intention for Digital Banking Platform in Indonesia: A Structural Equation Modeling Approach

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ABSTRACT

This study investigates the factors influencing user satisfaction (US) and continuous usage intention (UI) of the digital banking platform in Indonesia. Utilizing a quantitative research approach, structural equation modeling (SEM) via SmartPLS was employed to analyze data from 376 users. The study integrates key constructs, including Task-Technology Fit (TTF), System Quality (SQ), Performance Expectancy (PE), US, and UI, into a comprehensive model. The findings confirm that TTF, SQ, PE, and US significantly influence UI. Specifically, higher TTF and SQ directly enhance PE (path coefficient = 0.871, t-value = 92.895) and US (path coefficient = 0.798, t-value = 47.957), positively impacting UI. Performance Expectancy emerged as a stronger predictor of UI (path coefficient = 0.559, t-value = 12.800) compared to the US (path coefficient = 0.245, t-value = 5.229), underscoring the critical role of perceived performance benefits in driving continuous usage. All five hypotheses were supported: TTF positively affects UI (path coefficient = 0.250, t-value = 7.154); SQ positively influences PE and US; PE positively impacts UI; and US positively affects UI. The Sobel test results indicated that PE significantly mediates the relationship between SQ and UI (Z = 12.60), and US also significantly mediates this (Z = 5.19). The R-squared values indicate the explanatory power of the model: PE (0.758), UI (0.956), and US (0.637), demonstrating that the model explains a substantial portion of the variance in these constructs. The study contributes to the literature by validating the integrated model, extending existing models such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), and highlighting the importance of technical and perceptual factors in technology adoption. Practically, the results offer actionable insights for digital banking providers. Enhancing TTF and maintaining high SQ are crucial for fostering positive user experiences and encouraging continuous usage. Providers should also emphasize the performance benefits of their platforms to improve PE and UI. Despite its contributions, the study has limitations, including sample size and reliance on self-reported data, which may affect generalizability. Future research could expand the sample size, incorporate objective usage data, and explore additional factors such as social influence and facilitating conditions. Overall, the study provides a robust framework for understanding user behavior in digital banking and offers practical strategies for improving user satisfaction and retention in the industry.

Keywords Digital Banking, User Satisfaction, Usage Intention, Structural Equation Modeling (SEM), Performance Expectancy

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INTRODUCTION

In recent years, the financial sector has undergone significant transformation due to technological advancements, leading to the rise of digital banking services. Digital banking has evolved significantly over the years, with the emergence of digital banks or neobanks that primarily deliver financial services through digital channels such as mobile apps [1]. The inception of digital banking can be traced back to the mid-1970s with the introduction of automated teller machines (ATMs) [2]. This shift towards digital banking is not merely a trend but a strategic adaptation to address emerging changes and threats in the banking sector [3]. Research trends in digital innovation in banking have identified key areas such as technology implementation, business management, and societal impact as crucial clusters driving digital transformation in the industry [4]. This transformation is further accelerated by adopting emerging technologies like Artificial Intelligence, blockchain, cloud computing, and data science, which drive innovation in digital banking [5]. As digital banking continues to expand, user adoption and satisfaction have emerged as critical factors for the success and sustainability of these platforms. Unlike traditional banking, where physical presence and personal interactions play a significant role, digital banking relies heavily on the quality of the technological interface and user experience. Consequently, understanding what drives users to adopt and remain satisfied with digital banking services is essential for financial institutions. Satisfied users are more likely to continue using the platform, recommend it to others, and explore additional services offered, thereby enhancing the digital banking provider's overall value and market presence.

Despite the rapid advancements and widespread adoption of digital banking services, these platforms face significant challenges in achieving and maintaining high levels of US and continuous usage. Digital banking services must cater to a diverse user base with varying levels of technological literacy, expectations, and banking needs[6]. System reliability, ease of use, and security concerns influence user perceptions and experiences. A platform that fails to deliver a seamless and secure user experience risks losing customers to competitors who can better meet these needs[7]. Moreover, the novelty of digital banking platforms can pose a challenge, as users accustomed to traditional banking methods may be hesitant to fully embrace and trust digital alternatives. Another critical challenge is ensuring continuous usage. Initial adoption may be driven by curiosity or specific promotional incentives, but sustaining user engagement over time requires more robust strategies. Users must see consistent value in services, necessitating ongoing improvements and platform updates. Additionally, digital banking services must navigate the complexities of user behavior, which can be influenced by factors such as ease of integration with other financial services, the variety of features provided, and personalized customer support. Addressing these challenges is essential for fostering long-term user loyalty and establishing a stable user base.

Understanding the factors influencing US and UI digital banking services is crucial for developing effective strategies to overcome these challenges. US is a multifaceted construct influenced by TTF, SQ, and PE. Each of these elements shapes the overall user experience and satisfaction levels. TTF, for instance, refers to how well the digital banking platform meets the user's specific

needs and tasks. SQ encompasses attributes like reliability, usability, and security, which are critical for gaining user trust and satisfaction. Furthermore, PE, which is the degree to which a user believes that using the digital banking platform is help them achieve their financial goals, is another vital factor. Understanding how these factors interact and influence each other can provide valuable insights for improving digital banking services. By identifying and addressing the critical determinants of US and UI, digital banking providers can tailor their offerings to meet user needs better, enhancing satisfaction and fostering long-term engagement. This understanding is fundamental in a diverse and rapidly evolving market like Indonesia, where user preferences and expectations continually change.

The respondents in this study are users of applications that fall into the category of digital banking. These applications offer various banking services, including account management, fund transfers, bill payments, and investment management, all accessible via digital platforms. In Indonesia, several popular digital banking applications are widely used by consumers. These include Jenius, a digital banking app by Bank BTPN that offers features like savings accounts, fund transfers, bill payments, budgeting tools, and investment options; Livin' by Mandiri, an app by Bank Mandiri that provides comprehensive banking services, including account management, fund transfers, bill payments, and access to investment products; and BRImo, Bank BRI's digital banking app that allows users to manage their accounts, transfer funds, pay bills, and access various financial services. Additionally, BNI Mobile Banking by Bank BNI offers services such as fund transfers, bill payments, account management, and investment options. These applications represent the core of digital banking services in Indonesia, providing users with convenient access to financial services and enhancing their overall banking experience.

Previous studies on digital banking services have focused on individual factors affecting US and UI. For example, research has often examined the impact of SQ, perceived ease of use, or perceived usefulness in isolation. While these studies provide valuable insights into specific aspects of user experience, they fail to consider the complex interplay between these factors. This fragmented approach limits understanding how multiple variables collectively influence user behavior. For instance, while SQ might enhance US, its effect could be moderated by how well the technology fits the user's tasks or by the user's PE. Moreover, the existing literature lacks an integrated model that combines these key variables into a comprehensive framework. Such a model is essential for capturing the holistic nature of US and UI in digital banking platforms. The absence of an integrated approach means that the synergistic effects of various factors remain unexplored. This gap is particularly significant for practitioners and policymakers who need a more nuanced understanding of user behavior to design effective strategies for enhancing US and retention.

In addition to the theoretical gap, there is limited empirical evidence on how these factors interplay specifically in the context of digital banking services in Indonesia. While some studies have explored similar constructs in different settings, Indonesia's unique cultural, economic, and technological landscape presents distinct challenges and opportunities. For instance, factors influencing US in Indonesia might differ from those in more developed markets due to variations in technological infrastructure, user expectations, and financial

literacy levels. Consequently, there is a need for empirical research that investigates these dynamics within the Indonesian context, providing localized insights that can inform both academic understanding and practical application. Addressing this research gap is crucial for advancing the field of digital banking and enhancing the user experience. This study aims to comprehensively understand the factors driving user behavior by developing and validating an integrated model that includes TTF, SQ, PE, US, and UI. Such a model contributes to the academic literature and offers actionable insights for digital banking providers seeking to improve US and foster continuous usage.

The primary objective of this study is to develop and validate an integrated model that comprehensively explains the factors influencing the US and UI of the digital banking platform in Indonesia. Understanding these factors in an increasingly digital world is vital for enhancing user experiences and ensuring digital banking services' sustained growth and adoption. By constructing a holistic model, this research aims to bridge the gaps identified in previous studies and provide a more robust framework for analyzing user behavior in digital banking contexts. The study examines the relationships between TTF, SQ, PE, US, and UI to achieve this. TTF refers to the degree to which the digital banking platform meets users' specific needs and tasks, ensuring that the technology effectively aligns with user requirements. SQ encompasses the technical attributes of the platform, such as reliability, usability, and security, which are critical for gaining user trust and satisfaction. PE involves the perceived benefits and efficiency gains that user expect from using the platform. These variables are hypothesized to significantly influence the US and their intention to continue using the platform. By investigating these relationships, this study aims to provide a nuanced understanding of how different factors interact to shape US and UI. This integrated model contributes to the theoretical knowledge in the digital banking field and offers practical insights for digital banking service providers. By identifying the key drivers of US and continuous usage, providers can develop targeted strategies to enhance their platforms, improve user experiences, and foster long-term engagement. Ultimately, this research seeks to support the development of more user-centric digital banking solutions that can better meet the evolving needs and expectations of users in Indonesia. Understanding the factors that influence US and UI is crucial for the success of digital banking platforms. This study addresses the following primary research question: What are the effects of TTF, SQ, PE, and US on the UI of the digital banking platform? We aim to comprehensively understand the dynamics that drive user behavior and engagement with digital banking services by answering this question.

Literature Review

Task-Technology Fit (TTF)

TTF refers to the degree to which technology assists users in performing their tasks effectively and efficiently. Research by [8], who pioneered the concept, defines TTF as the extent to which technology functionalities match the requirements of the tasks intended to support. Research has highlighted the importance of factors like perceived usefulness and ease of use in the adoption of digital banking systems [9]. In the context of the digital economy, particularly in fintech, aligning tasks and technology can enhance work-life balance and overall satisfaction [10]. The performance impact of mobile banking has been

studied using the TTF approach, emphasizing the integration of task and technology characteristics to improve individual performance [11]. Additionally, investigating the effects of TTF, attitude, and trust on the intention to adopt mobile banking underscores the significance of considering TTF in designing m-banking delivery channels [12]. These findings underscore the importance of designing digital banking platforms with a keen focus on TTF. Service providers can enhance US and promote continuous usage by ensuring the platform's features and functionalities align with users' financial management needs. This alignment facilitates smoother and more efficient task completion and builds user trust and loyalty towards the digital banking service.

System Quality (SQ)

SQ refers to the performance characteristics of an information system, which influence its effectiveness and user experience. Research by [13] defined SQ as the measure of the information processing system itself, focusing on reliability, usability, response time, and functionality. High SQ ensures the system operates smoothly, meets user requirements, and provides a satisfactory experience. Critical dimensions of SQ include system reliability (the system's ability to function without failure), system usability (ease of use and user-friendly interface), system responsiveness (speed and efficiency in processing user requests), and system flexibility (the system's ability to adapt to changing user needs). SQ is a critical factor in the realm of digital banking, encompassing elements such as reliability, service quality, functional quality, perceived value, service customization, service speed, employee-customer interaction, brand trust, digital banking innovation, perceived utility, and perceived risk [14], [15]. The quality of digital banking services significantly impacts customer satisfaction, retention, and loyalty [16]. Studies have identified security, ability, convenience, and support policies as critical criteria for measuring digital banking service quality [17]. The digitalization of banking services enhances customer satisfaction and improves service delivery speed and quality [18]. These findings underscore the importance of investing in high-quality system attributes to ensure a positive user experience and foster long-term engagement with digital banking platforms. By maintaining high SQ, digital banking providers can enhance the US, build trust, and promote sustained usage, leading to more excellent user retention and loyalty.

Performance Expectancy (PE)

PE refers to the degree to which an individual believes that using a particular system or technology is help them achieve gains in job performance or personal efficiency. This concept is a critical component of the UTAUT model developed by [19]. PE has been identified as a significant factor influencing the behavioral intention of users towards adopting digital banking services [20], [21], [22]. Studies have consistently shown that PE, along with other factors like effort expectancy, trust, and facilitating conditions, plays a crucial role in shaping users' intentions to use digital banking services [23]. The belief that using a particular system, such as digital banking, would enhance job performance or provide value positively influences users' UI [24]. These findings underscore the need for digital banking platforms to emphasize performance benefits in their design and communication strategies. By clearly demonstrating how the platform can enhance users' financial management and efficiency, digital banking can foster higher levels of PE, leading to increased US and continuous

usage.

User Satisfaction (US)

US is a critical measure of how well a digital banking platform meets the expectations and needs of its users. Research by [25] found that factors such as satisfaction, perceived enjoyment, and perceived usefulness positively predict customers' UI of mobile banking. Similarly, [26] emphasized that the US is a crucial attribute derived from the usage of technology that impacts users' UI to continue using digital banking services. Moreover, [27] highlighted the importance of the US in reinforcing continued UI in mobile banking. Additionally, [28] suggested that the banking information system, particularly in Internet banking, significantly affects customer satisfaction and loyalty, underscoring the importance of service quality in driving the US. Furthermore, [29] indicated that various mobile banking application experience components, directly and indirectly, influence continued UI through satisfaction. This underscores the significance of pragmatic, ease of use, emotional, and sensory factors in enhancing the US and influencing their decision to continue using digital banking services. Therefore, understanding and strengthening the US is essential for digital banking platforms' long-term success and competitive advantage.

Usage Intention (UI)

UI refers to the likelihood or willingness of a user to adopt and continuously use a technology or service. It is a critical predictor of actual usage behavior and is widely studied in the context of technology acceptance and adoption models. The concept of UI is grounded in various theoretical frameworks, such as UTAUT by [19] identifies PE, effort expectancy, social influence, and facilitating conditions as critical determinants of UI. Factors influencing UI in digital banking are crucial for understanding consumer behavior in the digital era. Several studies have delved into this topic, shedding light on various determinants. Research by [30] explored the impact of social media marketing on brand loyalty and UI digital banking among young Vietnamese consumers, highlighting the significance of social influence in shaping UI. Research by [31] extended the Technology Acceptance Model (TAM) to include perceived security and social influence as factors affecting the usage behavior of digital banking services, emphasizing the multifaceted nature of influences on digital banking adoption. Moreover, [32] emphasized the importance of performance expectations, social influence, trust perceptions, and other factors in determining UI digital banks. Additionally, [33] identified habit, hedonic motivation, and social influence as key antecedents to UI digital banking.

Method

This study adopts a quantitative research approach, leveraging structural equation modeling (SEM) via SmartPLS to investigate the factors influencing US and UI of the digital banking platform in Indonesia. SEM is chosen for its ability to analyze complex relationships between multiple variables simultaneously, providing a comprehensive understanding of the direct, indirect, and mediated effects among the constructs. The model integrates critical variables such as TTF, SQ, PE, US, and UI to offer a holistic view of user behavior in digital banking. To ensure adequate power for SEM analysis, the

study gathers data from 376 respondents. The population for this study comprises users of digital banking platforms in Indonesia. Digital banking caters to a diverse user base, including individuals across various age groups, educational backgrounds, and professional sectors. The focus on digital banking users ensures that the findings directly apply to the platform, offering actionable insights for enhancing US and UI. The demographic characteristics of the respondents, such as age, gender, and education level, are collected to provide a comprehensive understanding of the sample. Data was collected using an online survey distributed through SurveyMonkey between November and December 2023. The survey instrument is designed to measure the constructs of interest using validated scales adapted from existing literature. The questionnaire includes TTF, SQ, PE, US, and UI items, with responses captured on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). This study investigates the factors influencing the US and UI of the digital banking platform in Indonesia. Based on the existing literature and theoretical frameworks, five key hypotheses are formulated to explore the relationships among the constructs. These hypotheses are grounded in established models of technology acceptance and the US.

H1. SQ → PE

This hypothesis proposes that higher SQ, encompassing reliability, usability, and security, positively affects PE. PE is defined as the degree to which users believe using the digital banking platform will help them achieve their financial management goals. A high-quality system will likely enhance users' confidence in the platform's ability to deliver the expected performance. SQ directly impacts users' PE. When a system is reliable, user-friendly, and secure, users are more likely to believe that it is helping them achieve their goals [34].

H2. SQ →US

This hypothesis posits that higher SQ leads to more excellent US. Users' overall satisfaction with the platform increases when they experience a reliable, user-friendly, and secure system. This relationship is critical as it underscores the importance of maintaining high standards of SQ to enhance US. SQ influences US by providing a seamless and secure experience. Research by [13] highlighted that high SQ enhances the US, which is crucial for retaining users.

H3. TTF → UI

This hypothesis posits that a better fit between the tasks users need to perform and the technology provided by the digital banking platform positively influences their UI the platform. The underlying theory suggests that when users find the technology supportive of their tasks, their satisfaction and engagement levels increase, leading to a higher intention to continue using the platform. Previous research indicates that when the technology effectively supports the tasks it is intended for, users are more likely to continue using it [35].

H4. PE → UI

This hypothesis suggests that users' beliefs about the platform's ability to improve PE positively influence their UI. If users perceive that digital banking helps them manage their finances more effectively, they are more likely to continue using the platform. PE is a crucial predictor of UI, as posited by the UTAUT model [19].

H5: US → UI

This hypothesis proposes that higher US positively influences users' intention to continue using the platform. Satisfied users are more likely to have a favorable attitude towards the platform, resulting in a higher likelihood of continuous usage. US is a strong predictor of continued UI. Satisfied users are likelier to develop a positive attitude towards and continue using the technology [36].

The research model diagram visually represents the hypothesized relationships among the constructs. This model integrates TTF, SQ, PE, US, and UI into a cohesive framework. Each hypothesized relationship is depicted with arrows indicating the direction of influence, providing a clear visualization of the proposed paths.

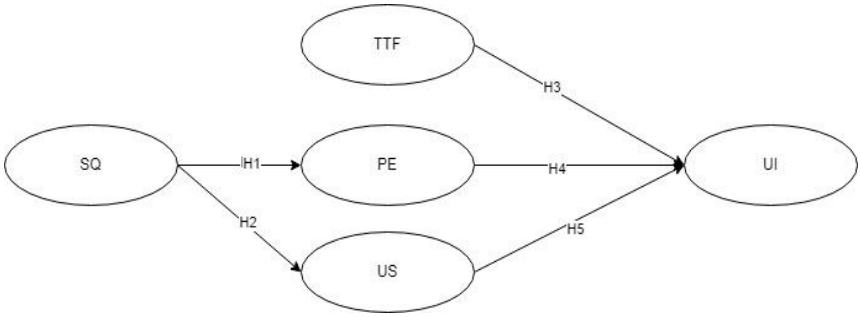

Figure 1 Research Framework

The diagram shown in figure 1 illustrates the direct effects of SQ on PE (H1) and US (H2), TTF on UI (H3), PE on UI (H4), and US on UI (H5). This integrated model aims to provide a comprehensive understanding of the factors driving US and UI of the digital banking platform. By empirically testing these hypotheses, the study seeks to validate the model and offer actionable insights for improving user engagement and satisfaction in digital banking platforms.

Measurement Instruments

To ensure the accuracy and reliability of the data collected, this study employs well-established measurement scales for each of the variables under investigation. Each variable is measured using a set of three indicators adapted from previous studies to fit the context of the digital banking platform. These indicators are designed to capture the essence of each construct and are measured on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The indicator questions used in this study are shown in Table 1.

Table 1. Questionnaire Measurement Items

Item	Questionnaire
TTF, source: Adapted from [8]	
TTF1	The digital banking platform is well-suited to my financial management tasks.
TTF2	The functionalities of the digital banking platform meet my needs effectively.
TTF3	The digital banking platform provides the features required to complete

Item	Questionnaire
	my tasks efficiently.
SQ, source: Adapted from [13]	
SQ1	The digital banking platform is reliable and functions without errors.
SQ2	The digital banking platform is user-friendly and easy to navigate.
SQ3	The digital banking platform ensures the security of my financial information.
PE, source: Adapted from [19]	
PE1	Using the digital banking platform enhances my financial management efficiency.
PE2	The digital banking platform helps me accomplish my financial tasks more quickly.
PE3	Overall, the digital banking platform improves my financial performance.
US, source: Adapted from [36]	
US1	I am satisfied with the overall experience of using the digital banking platform.
US2	The digital banking platform meets my expectations for digital banking.
US3	I am happy with the services provided by the digital banking platform.
UI, source: Adapted from [19]	
UI1	I intend to continue using the digital banking platform in the future.
UI2	I will recommend the digital banking platform to others.
UI3	I plan to use the digital banking platform for my future financial management needs.

By utilizing these established measurement scales, this study ensures the validity and reliability of the data collected, providing a robust foundation for analyzing the factors influencing the US and UI of the digital banking platform. The analysis follows a two-step approach: evaluating the measurement model and evaluating the structural model. This approach establishes the constructs' reliability and validity before testing their hypothesized relationships. The first step involves evaluating the measurement model to ensure the constructs are measured reliably and validly. This includes assessing the internal consistency reliability, indicator reliability, convergent validity, and discriminant validity of the measurement items. Internal consistency reliability has been evaluated using Cronbach's alpha and composite reliability, while indicator reliability has been assessed by examining the outer loadings of each indicator. Convergent validity has been checked by calculating the Average Variance Extracted (AVE), and discriminant validity has been confirmed using the Fornell-Larcker criterion and cross-loadings.

Evaluating the measurement model involves several essential procedures to ensure reliable and valid constructs. The reliability of the constructs was assessed using Cronbach's alpha and composite reliability. Cronbach's alpha values above 0.7 indicate acceptable reliability, while composite reliability values above 0.7 suggest good internal consistency of the constructs. Indicator Reliability was assessed by examining the outer loadings of each indicator. Loadings above 0.7 are acceptable, indicating that the indicators reliably measure their respective constructs. Convergent Validity had been assessed by calculating the Average Variance Extracted (AVE) for each construct. An

AVE value above 0.5 indicates that the construct explains more than half of the variance of its indicators, suggesting good convergent validity. Discriminant Validity had been evaluated using the Fornell-Larcker criterion and cross-loadings. According to the Fornell-Larcker criterion, a construct should share more variance with its indicators than other constructs in the model, as indicated by AVE values that are more significant than the squared correlations with different constructs. Cross-loadings were examined to ensure that indicators load higher on their respective constructs than on others.

Once the measurement model is validated, the structural model is evaluated to test the hypothesized relationships and assess the overall model fit. Path coefficients are calculated to determine the strength and direction of the relationships between constructs. Hypothesis testing was conducted using the bootstrapping technique to generate T-statistics and P-values. A T-statistic greater than 1.96 and a P-value less than 0.05 indicate that the relationship is statistically significant. The overall fit of the model was assessed using several fit indices, including the Standardized Root Mean Square Residual (SRMR), the Normed Fit Index (NFI), and the Chi-square value. An SRMR value less than 0.08 indicates a good fit, while higher values of NFI (close to 1) suggest a better fit of the model.

Result and Discussion

Descriptive Statistics

The demographic characteristics of the respondent, shown in Table 2, provide an essential context for understanding the diversity and representativeness of the respondents who participated in this study. The respondent consists of 376 users of the digital banking platform in Indonesia. Among these respondents, 196 are female, accounting for approximately 52.1% of the sample, and 180 are male, representing 47.9% of the sample. This gender distribution ensures a balanced representation of male and female perspectives in the analysis.

Table 2. Respondent Demographic

Characteristics	Item	Count	Percentage
Gender	Female	196	52.1%
	Male	180	47.9%
Education Level	Bachelor	220	58.5%
	High School	156	41.5%
Usage Duration	3-6 months	110	29.3%
	6-12 months	119	31.6%
	Less than 3 months	83	22.1%
	More than 1 year	64	17.0%

Regarding educational background, most respondents hold a Bachelor's degree, with 220 individuals (58.5%) having attained this level of education. The remaining 156 respondents (41.5%) have a high school education. This educational distribution highlights that the sample primarily comprises individuals with higher education levels, which may influence their interaction with digital financial platforms. Regarding usage duration, 110 respondents (29.3%) have used the platform for 3-6 months, and 119 respondents (31.6%) have used it for 6-12 months. A smaller sample segment has been using the

platform for less than 3 months (83 respondents, 22.1%) and more than 1 year (64 respondents, 17.0%). This duration distribution indicates that most respondents have substantial experience with the platform, which is crucial for assessing long-term US and UI. The descriptive statistics of the sample provide a comprehensive overview of the demographic profile and usage patterns of digital banking platform users. This information is critical for contextualizing the subsequent analysis and understanding the generalizability of the study findings. By capturing detailed demographic data and usage behaviors, the study ensures that the analysis reflects the experiences and perspectives of a diverse user base, thereby enhancing the robustness and relevance of the research outcomes.

Variance Inflation Factor (VIF) values provide insights into the multicollinearity in the model, which in turn helps in interpreting the paths between constructs. Multicollinearity occurs when predictor variables in a regression model are highly correlated, potentially affecting the reliability of coefficient estimates. Here's how the VIF values from your model can be interpreted in terms of paths. The path from SQ to PE shows no multicollinearity, with a VIF value of 1.000. This indicates that SQ is an independent predictor of PE, and the relationship between SQ and PE is not influenced by other variables in the model. Similarly, the path from SQ to US also shows no multicollinearity with a VIF value of 1.000, suggesting a clear and direct relationship between SQ and US. The path from PE to UI has a VIF of 3.367, indicating moderate multicollinearity. This suggests that while PE is a significant predictor of UI, there is some overlap with other predictors in the model. However, the level of multicollinearity is acceptable and does not critically affect the reliability of the path coefficient. Similarly, the path from TTF to UI has a VIF of 2.580, indicating moderate multicollinearity. This means that TTF is a significant predictor of UI, with some shared variance with other predictors, but the level of multicollinearity remains within acceptable limits. Finally, the path from US to UI has a VIF of 4.013, indicating moderate multicollinearity. This suggests that US is a significant predictor of UI, although it shares some variance with other predictors in the model. The level of multicollinearity is acceptable but indicates that US and other predictors have some overlap in their influence on UI. The following table 3 presents the VIF values for each path in the model:

Table 3. Inner Variance Inflation Factor (VIF) Results

Path	VIF Value
SQ → PE	1.000
SQ → US	1.000
PE → UI	3.367
TTF → UI	2.580
US → UI	4.013

Measurement Model Evaluation

The reliability of the measurement model was assessed using Cronbach's alpha and composite reliability. These metrics evaluate the internal consistency of the constructs, ensuring that the indicators reliably measure the underlying latent variables, as shown in Table 4. The Cronbach's alpha for PE is 0.827, and the composite reliability is 0.897, indicating good internal consistency. These values

suggest that the indicators for PE are highly reliable and consistently measure the construct. The Cronbach's alpha for SQ is 0.672, slightly below the acceptable threshold of 0.7, indicating moderate internal consistency. However, the composite reliability of 0.816 suggests that the construct is still reliably measured by its indicators, albeit with room for improvement. The Cronbach's alpha for TTF is 0.852, and the composite reliability is 0.909, indicating high internal consistency. These values confirm that the indicators for TTF are reliable and provide consistent measurements. The Cronbach's alpha for UI is 0.903, and the composite reliability is 0.939, suggesting excellent internal consistency. This indicates that the indicators for UI are very reliable and accurately measure the construct. The Cronbach's alpha for the US is 0.890, and the composite reliability is 0.932, indicating high internal consistency. These values confirm that the indicators for the US are reliable and consistently measure the construct.

Table 4. Reliability Analysis and Convergent Validity

Construct	Item	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
PE	PE1	0.853	0.827	0.897	0.743
	PE2	0.906			
	PE3	0.826			
SQ	SQ1	0.883	0.672	0.816	0.599
	SQ2	0.755			
	SQ2	0.669			
TTF	TTF1	0.885	0.852	0.909	0.769
	TTF2	0.859			
	TTF3	0.888			
UI	UI1	0.937	0.903	0.939	0.838
	UI2	0.943			
	UI3	0.864			
US	US1	0.939	0.89	0.932	0.821
	US2	0.932			
	US3	0.845			

The validity of the measurement model was assessed through convergent and discriminant validity. Convergent validity was evaluated using the Average Variance Extracted (AVE), while discriminant validity was assessed using the Fornell-Larcker criterion. The AVE for PE is 0.743, indicating that the construct explains more than 74% of the variance in the indicators. This suggests a high level of convergent validity. The AVE for SQ is 0.599, indicating acceptable convergent validity. Although it meets the minimum threshold of 0.5, there is room for improvement. The AVE for TTF is 0.769, indicating a high level of convergent validity, with over 76% of the variance in the indicators explained by the construct. The AVE for UI is 0.838, indicating very high convergent validity. This suggests that the indicators strongly reflect the construct. The AVE for the US is 0.821, indicating high convergent validity, with over 82% of the variance in the indicators explained by the construct. Discriminant validity was evaluated using the Fornell-Larcker criterion, which compares each construct's AVE's square root with the correlations between the constructs. The diagonal values in the table represent the square root of the AVE for each construct, while the off-diagonal values represent the correlations between constructs. To establish discriminant validity, the diagonal values should be greater than the off-diagonal values in their corresponding rows and columns. As shown in Table 5, each

construct meets this criterion, confirming discriminant validity.

Table 5. Discriminant Validity

Construct	PE	SQ	TTF	UI	US
PE	0.862				
SQ	0.871	0.774			
TTF	0.717	0.740	0.877		
UI	0.941	0.884	0.839	0.916	
US	0.829	0.798	0.770	0.901	0.906

Hypothesis Testing Results

The hypothesis testing results provide detailed insights into the relationships between the constructs in the structural model. Each hypothesis was tested using path coefficients, T-statistics, and P-values to determine the strength and significance of the relationships. The path coefficients indicate the strength and direction of the relationships, while the T-statistics and P-values determine the statistical significance of these relationships. The results presented in Table 6 and Figure 2 provide substantial support for the proposed hypotheses. The path coefficient of SQ to PE is β = 0.871 with a T-statistic of 92.895 and a P-value of 0.000, indicating a strong and statistically significant positive relationship. This supports the hypothesis that better SQ enhances PE. The path coefficient of SQ to the US is β = 0.798 with a T-statistic of 47.957 and a P-value of 0.000, indicating a strong and statistically significant positive relationship. This supports the hypothesis that higher SQ increases US. The path coefficient of TTF to UI is β = 0.250 with a T-statistic of 7.154 and a P-value of 0.000, indicating a moderate and statistically significant positive relationship. This supports the hypothesis that better TTF leads to higher UI. The path coefficient of PE to UI is β = 0.559 with a T-statistic of 12.800 and a P-value of 0.000, indicating a strong and statistically significant positive relationship. This supports the hypothesis that higher PE leads to more excellent UI of the digital banking platform. The path coefficient of US to UI is β = 0.245 with a T-statistic of 5.229 and a P-value of 0.000, indicating a moderate and statistically significant positive relationship. This supports the hypothesis that higher US leads to more excellent UI.

Table 6. Hypothesis Testing Results

Hypothesis	Path	Path Coefficient	t-value	Results
H1	SQ → PE	0.871	92.895	Supported
H2	SQ → US	0.798	47.957	Supported
H3	TTF → UI	0.250	7.154	Supported
H4	PE → UI	0.559	12.800	Supported
H5	US → UI	0.245	5.229	Supported

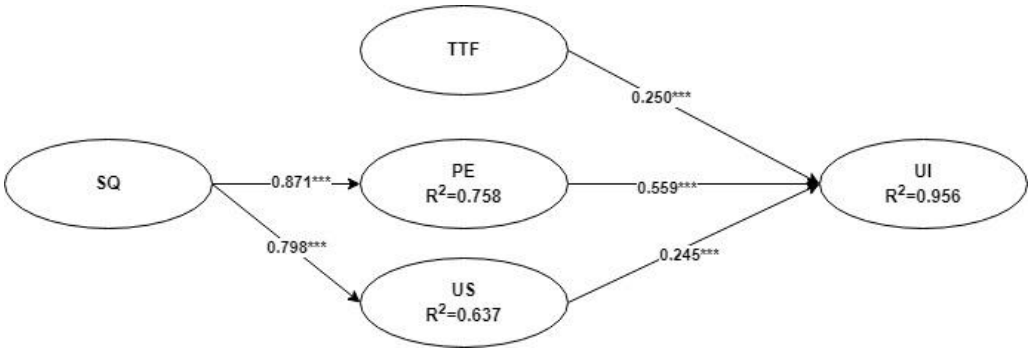

Figure 2 Inner Model Results Framework

The R-squared values indicate the model's explanatory power: PE (0.758), UI (0.956), and US (0.637). These values demonstrate that the model explains a substantial portion of the variance in these constructs, highlighting the relevance and impact of the selected constructs in understanding the US and UI of the digital banking platform.

Testing for Mediating Effects

To assess the role of mediating variables, we conducted the Sobel test to determine the significance of the effects of mediation, as shown in table 7. Specifically, we examined two mediation effects. The mediation effect of PE between SQ and UI. The Z-value for the Sobel test is approximately 12.60. This value is much greater than the critical value of 1.96, indicating that the mediation effect of PE between SQ and UI is statistically significant at the 0.05 level. The mediation effect of the US between SQ and UI. The Z-value for the Sobel test is approximately 5.19. This value is also more significant than the critical value of 1.96, indicating that the mediation effect of US between SQ and UI is statistically significant at the 0.05 level. These significant Z-values suggest that PE and US mediate crucial in the relationship between SQ and UI. This implies that improvements in SQ enhance both PE and US, increasing users' intention to continue using the digital banking platform.

Table 7. Mediation Testing Results

Construct	Construct Relationship	t-value of Path Coefficient	Sobel test
SQ→PE→UI	SQ→PE	92.895	12.60
	PE→UI	12.800	
SQ→US→UI	SQ→US	47.957	5.19
	US→UI	5.229	

Discussion

The findings of this study align well with the existing literature on technology acceptance and US in digital banking platforms. The strong positive impact of SQ on PE and the US also supports findings from [13]. High SQ, characterized by reliability, usability, and security, significantly boosts users' expectations of the platform's performance and overall satisfaction. This result underlines the importance of maintaining high SQ to foster positive user experiences and

expectations. The significant positive relationship between TTF and UI corroborates the work of [8] who emphasized that when technology is well-aligned with users' tasks, it enhances their performance and UI. This study confirms that users of the digital banking platform are more likely to continue using it when they perceive it as well-suited to their financial management needs. The relationship between PE and UI is consistent with the UTAUT proposed by [19] which posits that users are more likely to adopt and continue using technology if they believe it enhances their performance. The study's findings validate this theory in the context of digital banking, showing that users' beliefs about the benefits of the digital banking platform significantly influence their UI.

The findings have several implications for both theory and practice. Theoretically, this study contributes to the literature by integrating key constructs from established models and demonstrating their applicability in digital banking platforms. The validated relationships between TTF, SQ, PE, US, and UI provide a comprehensive framework for understanding user behavior in digital banking. Practically, the results offer actionable insights for developers and managers of digital banking platforms. Ensuring a good fit between the platform's functionalities and users' tasks is crucial for enhancing user engagement and retention. This can be achieved through continuous user feedback and iterative improvements based on user needs. Maintaining high SQ is also imperative for fostering positive user expectation and satisfaction. This involves investing in reliable, user-friendly, and secure systems that meet the high standards expected by users. Comparing the findings with previous studies reveals both consistencies and new insights. The significant influence of SQ on both PE and US echoes the results of prior research, confirming that high-quality systems are foundational to positive user experiences in digital contexts [13], [19]. However, the study also provides nuanced insights into the context of digital banking platforms, highlighting the unique aspects of user interactions and expectations in this domain. One unexpected finding was the relatively moderate impact of the US on UI compared to other factors like PE and SQ. While satisfaction is generally considered a strong predictor of continued usage, the results suggest that users' performance expectations and perceptions of SQ might play an even more critical role in their decision to continue using the digital banking platform. This indicates that while ensuring the US is important, emphasizing the performance benefits and maintaining high SQ could be even more effective strategies for promoting continuous usage.

Conclusion

This study investigated the factors influencing US and UI of the digital banking platform in Indonesia. The key findings confirmed that TTF, SQ, PE, and US significantly influence UI. Specifically, better TTF and higher SQ directly enhance users' PE and satisfaction, positively influencing their intention to continue using the platform. The study also revealed that PE has a more substantial impact on UI than US, highlighting the critical role of perceived performance benefits in driving continuous usage. The data supported all five hypotheses. H1 and H2 showed that SQ positively influences PE and US, respectively. H3 confirmed that TTF positively impacts UI. H4 demonstrated that PE significantly positively affects UI, and H5 established that US also positively

influences UI. These results underscore the importance of aligning platform features with user needs and maintaining high SQ to foster positive user experiences and encourage continuous usage. The study makes several theoretical contributions to technology adoption and digital banking literature. Integrating TTF, SQ, PE, US, and UI into a single model provides a comprehensive framework for understanding user behavior in digital banking contexts. This integrated approach extends existing models such as the Technology Acceptance Model (TAM) and the UTAUT, offering a more nuanced understanding of the factors that drive US and continued usage. The findings also contribute to the literature by empirically validating the critical role of SQ and PE in influencing US and UI. The study's results highlight the importance of considering technical and perceptual factors in technology adoption research, providing valuable insights for future studies in the field. The practical implications of this study are significant for digital banking service providers. Providers should focus on improving TTF and SQ to enhance US and UI. Ensuring the platform's functionalities align well with users' financial management tasks can significantly boost user engagement. Maintaining a high-quality, reliable, user-friendly, and secure system is crucial for fostering positive user expectations and satisfaction. Service providers should also emphasize the performance benefits of using their platforms. Clear communication of how the platform can improve users' financial management efficiency can enhance PE, thereby increasing UI. Continuous monitoring and addressing user feedback to improve the platform's features and performance can lead to higher satisfaction and retention rates. Despite its contributions, this study has several limitations. The sample size, while adequate for SEM analysis, may limit the generalizability of the findings. Future research could expand the sample size and include a more diverse population to enhance the robustness of the results. Additionally, the study's reliance on self-reported data may introduce bias. Future studies could incorporate objective usage data to validate the findings. Further research is also needed to explore other potential factors influencing US and UI, such as social influence and facilitating conditions. Examining these factors in different cultural contexts could provide a deeper understanding of digital banking adoption's universal and context-specific drivers. Understanding the factors that influence user adoption of digital banking services is crucial for the success of these platforms. This study's findings provide valuable insights into the importance of TTF, SQ, PE, and US in driving UI. By integrating these factors into a comprehensive model, the study offers a robust framework for guiding future research and practice in digital financial services. The potential impact of this study extends beyond the digital banking platform, offering broader implications for the digital banking industry. By enhancing SQ and aligning platform features with user needs, service providers can improve US and retention, ultimately contributing to the growth and success of digital financial services in Indonesia and beyond.

Declarations

Author Contributions

Conceptualization: S.F.P.; Methodology: S.F.P.; Software: S.F.P.; Validation: S.F.P.; Formal Analysis: S.F.P.; Investigation: S.F.P.; Resources: S.F.P.; Data Curation: S.F.P.; Writing Original Draft Preparation: S.F.P.; Writing Review and Editing: S.F.P.; Visualization: S.F.P.; All authors have read and agreed to the

published version of the manuscript.

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The data presented in this study are available on request from the corresponding author.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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