

ISSN 2827-8151 (Online)

SRAWUNG: Journal of Social Sciences and Humanities

<https://journal.ifpublisher.com/index.php/iss>

Vol. 5, Issue 1, (2026)

doi.org/10.56943/iss.v5i1.907

Integrating TAM, IDT and Service Quality to Explain Mobile Banking Adoption in Cambodia: A PLS-SEM Approach

Ratha Seng^{1*}, Dr. Rady Chhun², Dr. Seng Tha Chay³, Dr. Bunnak Poch⁴

¹ratha.cdc@gmail.com, ²chhunrady@num.edu.kh, ³sengtha@num.edu.kh

⁴bunnakpoch@gmail.com

^{1,2}National University of Management, Cambodia, ³University of Hyogo, Japan,

⁴University of Chicago, USA

*Corresponding Author: Ratha Seng

Email: ratha.cdc@gmail.com

ABSTRACT

Mobile banking is expected to cause a significant digital transformation in Cambodia, a nation commonly known for its reliance on cash transactions. This research addresses the need to determine the factors influencing Cambodians' readiness to adopt mobile banking services. Specifically, the study aims to investigate whether the relationship between core constructs including Perceived Usefulness, Perceived Ease of Use, Relative Advantage, Compatibility, Complexity, Trust, Security, Service Quality, and Customer Satisfaction with consumers' behavioral intention to adopt mobile banking. The research employs an integrated theoretical framework combining the Technology Acceptance Model (TAM), Innovation Diffusion Theory (IDT), and Service Quality. Data were collected through an online survey from 528 university students and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The empirical findings reveal that Trust, Security, Perceived Ease of Use (PEOU), and Customer Satisfaction are the most significant positive determinants of behavioral intention to adopt mobile banking. In contrast, Perceived Usefulness and Complexity did not demonstrate a direct, significant influence on Behavioral Intention within this context. The study concludes that the integrated model is robust, providing critical insights for Cambodian financial institutions, which should strategically prioritize enhancing security features, building user trust, and focusing on intuitive and easy-to-use interfaces to accelerate the digital transformation of financial services.

Keywords: *Mobile Banking, Technology Acceptance Model (TAM), The Innovation diffusion theory (IDT), Service Quality Model*

INTRODUCTION

The global shift toward digitalization is accelerating, especially within the banking sector. Conventional financial institutions are actively transforming their systems to align with the expectations of increasingly tech-savvy consumers. Through online platforms and mobile banking applications, users are now able to monitor and manage their finances at any time. Moreover, innovative technologies introduced by leading technology firms continue to shape and advance the development of mobile banking services (Vannak et al. 2025; Venkatesan, 2025). In recent years, the world has witnessed a remarkable acceleration in the emergence and advancement of technologies across various sectors, particularly in the production and service industries (Usanti et al. 2024). These technological innovations have significantly influenced the evolution of product and service attributes (Alsamydai, 2014).

Mobile banking is now an important and evolving medium for executing banking transactions. It has a huge potential in a developing country such as Cambodia. During COVID-19 pandemic, the interest in digital banking has grown rapidly (Ubam et al., 2021). Mobile banking is available and ready to use in Cambodia, there is a possibility this system has remained unnoticed by the bank customers or is under-used. Mobile banking is a rapidly growing field in Cambodia, with more and more individuals turning to their mobile devices to conduct financial transactions. However, despite this growth, the adoption of mobile banking in Cambodia is still relatively low. This research aims to identify the factors influencing the intention to adopt mobile banking in Cambodia, with the goal of providing insight into how mobile banking can be more widely adopted in the country. The study also renders a deeper insight into what is needed for the bank customers to accept this newly emerging technology and thus allows for improvement in the bank's strategy to attract the potential users to use mobile banking service.

LITERATURE REVIEW

The main objective of this research is to analyze the behavioral intention of mobile banking adoption in Cambodia by following a more comprehensive approach to indicate mobile banking intention adoption. Previous studies have revealed that some users select to use technology to avoid direct communications with the staff offering those services or with other clients (Matthew L. Meuter, 2000). Table 1 below presents a systematic review of prior empirical studies related to technology adoption, with particular emphasis on mobile banking, digital financial services, and related information systems. The table synthesizes key characteristics of selected studies, including research context, theoretical frameworks, methodologies, analytical techniques, and major findings. In order to ensure the relevance and rigor of the literature review, new and recent articles have

been incorporated alongside foundational studies to reflect the evolving nature of digital banking and financial technology research.

Table 1 Previous Article Review

Authors (Year) Country	Title of Technology	Methodology	Independent Variable	Model Analysis
M.A.C Jayamali and Gunaratna (2024), Sri Lanka	Factors Influencing Behavioral Intention to Adopt Mobile Banking: with special reference to GAMPAAHA district, SRI LANKA	TAM, IDT & Perceived Risk	PU, PEOU, RA, Perceived Risk, and Compatibility	Regression Analysis
Bile Abdisalan Nor et al. (2024), Somalia	Understanding Mobile Banking Adoption Determinants in Somalia: A Technology Acceptance Model Approach	Extended TAM	PU, PEOU, Cost, Risk, and Trust	Regression Analysis
Ana Yanovi et al. (2023), Indonesia	INTENTION TO USE MOBILE BANKING SERVICE: EXAMINING THE ROLE OF EASE OF USE, PERCEIVED USEFULNESS AND TRUST	Extended TAM	PU, PEOU, and Trust	PLS-SEM
Ahmed Mostafa Hamdy Rady (2023), Egypt	Determinants of Customer Behavioral Intention Towards the Usage of Fin-tech Banking Services: Evidence from Egypt	Extended TAM	PU, PEOU, Risk, Trust, and Subjective Norms	PLS-SEM
Raju Wandira and Ahmad Fauzi (2022), Indonesia	TAM Approach: Effect of Security on Customer Behavioral Intentions to Use Mobile Banking	TAM	PU, PEOU, and Security	PLS-SEM
Ghani et al. (2022), Malaysia	The Effect of Perceived Usefulness, Reliability, and COVID-19 Pandemic on Digital Banking Effectiveness: Analysis Using Technology Acceptance Model	Extended TAM	Perceived Effect of the Covid-19 Pandemic, Reliability, and Perceived Usefulness	Multiple Regression Analysis

Authors (Year) Country	Title of Technology	Methodology	Independent Variable	Model Analysis
Fahad and Shahid (2022), India	Exploring the determinants of adoption of Unified Payment Interface (UPI) in India: A study based on Diffusion of Innovation Theory	IDT and Satisfaction	RA, COM, COMPLEX, OB, TB, and Satisfaction	SEM
Farah et al. (2018), Pakistan	Mobile-banking adoption: empirical evidence from the banking sector in Pakistan	Unified Theory of Acceptance and Use of Technology Theory (UTAUT)	Perceived Value, Habit, Social Influence, Performance Expectancy, Effort Expectancy, Hedonic Motivation	SEM
Kumar et al. (2020), India	A Framework of Mobile Banking Adoption in India	Extended TAM	PU, PEOU, Subjective Norms, Personal Innovativeness, Trust and Self-efficacy	SEM
Hancerliogullari Koksalmis and Damar (2021), Turkey	An Empirical Evaluation of a Modified Technology Acceptance Model for SAP ERP System	TAM	Actual Usage, Behavioral Intention to Use, Perceived Usefulness and Perceived Ease of Use	SEM
Waleed Mugahed Al-Rahmi et al. (2019), Malaysia	Integrating innovation diffusion theory with technology acceptance model: supporting students' attitude towards using a massive open online course (MOOCs) systems	Integrated between TAM and IDT	Relative Advantage, Trialability, Observability, Compatibility, Perceived enjoyment, PU and PEOU	SEM
Abdul Gaffar Khan (2018), Bangladesh	Understanding the service quality and customer satisfaction of mobile banking in Bangladesh	Service Quality Model	Namely, Tangibles, Reliability, Responsiveness, Assurance, Empathy	Partial Least Squares (PLS) SEM

Authors (Year) Country	Title of Technology	Methodology	Independent Variable	Model Analysis
GM Y Owusu et al. (2021), Ghana	Mobile Banking Adoption among the Ghanaian Youth	TAM & IDT	PU, PEOU, RA, Complexity, Perceived Risk, Perceived Cost	SEM
Samer Elhajjar and Ouaida (2020), Lebanon	An analysis of factors affecting mobile banking adoption	Extended TAM & IDT	PU, PEOU, COM, Awareness, Risk, Digital Literacy, Resistance, Subjective Norms, and Personal Innovativeness	SEM and Path Analysis

Source: Author’s Database (2025)

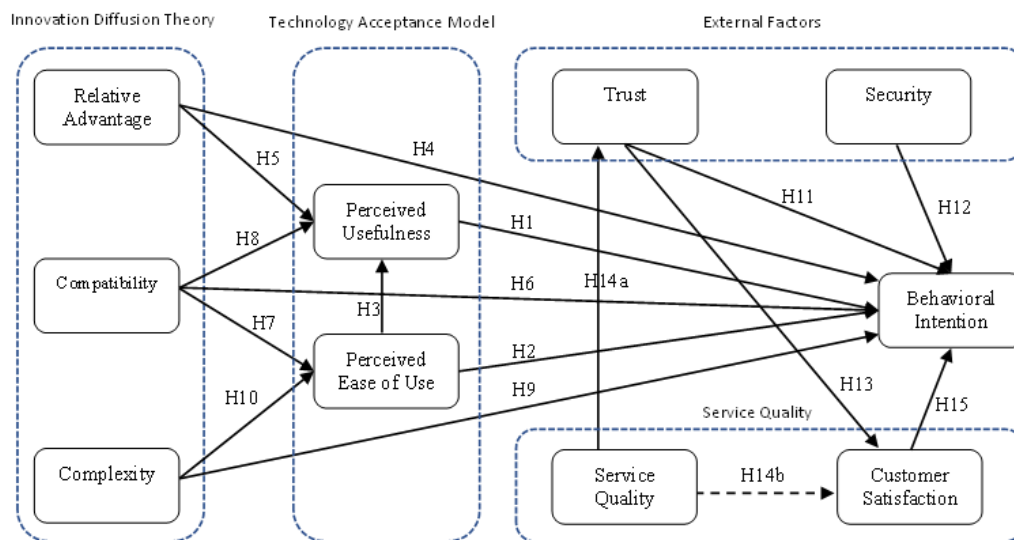


Figure 1 The Proposed Conceptual Framework

Source: Author’s Database (2025)

RESEARCH METHODOLOGY

The research design determines the subsequent stages, including the selection of data collection methods and instruments, the sampling strategy, the techniques for data analysis, and ultimately, the presentation of findings and the preparation of reports. (Mahmoud, 2011). Participants in this study were volunteers, and their identities were kept strictly confidential to ensure privacy. No financial incentives or rewards were offered for participation. The target population in this research for quantitative approach is mostly students studying at universities in Cambodia. A

prerequisite for participation was that individuals owned a smartphone capable of installing and using a mobile banking application with internet connectivity. This ensured that respondents had the technological capability to engage with the subject of the study.

A total of 528 valid responses were collected for this study. To evaluate the adequacy of the sample size, the guidelines proposed by Joseph Hair et al. (2022) were followed, which provide minimum sample size requirements based on the smallest path coefficient to be detected with adequate statistical power. For a statistical power of 80% at the 5% significance level, a minimum of 155 cases is required to detect small-to-medium path coefficients of 0.15–0.20, while detecting medium effects (0.21–0.30) requires only 69 cases. The questionnaire was designed based on extensive literature reviews from relevant textbooks, journals, conference papers, research reports, and articles. The questionnaire was developed using *Google Forms* and distributed to lecturers, teachers, and friends, who were then requested to share it with their respective student groups in Telegram. Clear instructions were also provided to guide respondents on how to complete the questionnaire accurately.

Based on the literature review and evaluation of model used in mobile banking adoption, the study adopted a research framework derived from two models-TAM and IDT. A few variables as shown in Figure 4, may influence directly or indirectly the adoption of mobile banking service in Cambodia. The items used in this study are contextualized from prior research and are anchored in seven-point likert scale (1-strongly disagree – 7-strongly agree). To measure PU and PEOU, in this research uses scale items from Davis (1989). Relative Advantage, Complexity, Compatibility are measured with items from Rogers (1995).

The quantitative phase involved the distribution of structured questionnaires to a large sample of mobile banking users. This method was chosen for its efficiency in capturing measurable data across a diverse population. To maximize participation and ensure the reliability of responses, questionnaires were disseminated through professors, lecturers, and teachers at various Cambodian universities, who facilitated access to the student population and reinforced the credibility of the study. The survey was structured into two parts: demographics and behavioral intention & customer satisfaction. The first part gathers information on the respondents' gender, education, age, university, and using mobile app. The second part was focused on the users' experiences with mobile banking apps and exploring the users' perception with mobile banking services, examining factors like *perceived ease of use (PEOU)*, *perceived usefulness (PU)*, *relative advantage (RA)*, *compatibility (COM)*, *complexity (COMPLEX)*, *trust (TRUST)*, *security (SEC)*, *service quality (SEQ)*, *customer satisfaction (CSAT)* and *behavioral intention (BINTEN)*.

RESULTS AND DISCUSSION**Table 2** Demographic Profile of Respondents

Item	Category (N=528)	Frequency	Percentage
Gender	Female	401	75.95%
	Male	127	24.05%
Age	Under 18	29	5.49%
	18 - 24	415	78.60%
	25 - 34	62	11.74%
	35 - 44	19	3.60%
	45 - 54	3	0.57%
	55+	0	0.00%
Education	Less than high school	0	0.00%
	High school graduate	0	0.00%
	Associate degree	40	7.58%
	Bachelor's degree	428	81.06%
	Master's degree	53	10.04%
	Doctorate degree	7	1.33%
University	National University of Management	173	32.77%
	ACLEDA University of Business	3	0.57%
	Human Resource University	3	0.57%
	WESTERN University	91	17.23%
	VANDA Institution	203	38.45%
	International University	9	1.70%
	Essec Business school Singapore	1	0.19%
	Institute of Finance and Accounting	4	0.76%
	Bright Hope Institute	7	1.33%
	UME University	33	6.25%
Cambodian University for Specialties (CUS)	1	0.19%	

Source: Author's Analysis (2025)

Table 2 presents the demographic characteristics of the 528 respondents who participated in the quantitative survey. The sample composition reflects a predominantly young and educated population, which is appropriate given the study's focus on mobile banking adoption among digitally active users. In terms of

gender, the majority of respondents were female (75.95%), while male respondents accounted for 24.05% of the sample. This distribution indicates a stronger participation of female students in the survey, which is consistent with enrollment patterns observed in several higher education institutions in Cambodia.

Regarding age, the sample was heavily concentrated in the 18–24 age group, representing 78.60% of respondents. Participants aged 25–34 accounted for 11.74%, while those under 18 represented 5.49%. Older age groups (35 years and above) constituted less than 5% of the total sample. This age distribution suggests that the findings primarily reflect the perceptions and behavioral intentions of young adults, who are typically early adopters of digital technologies.

In terms of educational attainment, the majority of respondents held a Bachelor's degree (81.06%), followed by Master's degree holders (10.04%) and Associate degree holders (7.58%). A small proportion of respondents possessed a Doctorate degree (1.33%), while no respondents reported education below the associate level. This indicates a highly educated sample, suitable for examining technology acceptance and digital banking behavior.

With respect to institutional affiliation, respondents were drawn from multiple universities, ensuring diversity across academic institutions. The largest proportion of participants came from VANDA Institute (38.45%) and the National University of Management (32.77%), followed by WESTERN University (17.23%). The remaining respondents were distributed across several institutions, each contributing less than 7% of the sample. This distribution supports the representativeness of the student population across different higher education institutions in Cambodia. Overall, the demographic profile demonstrates that the survey sample is largely composed of young, educated university students from diverse institutions, making it appropriate for investigating factors influencing behavioral intention to adopt mobile banking services in Cambodia.

PLS-SEM Analysis

Partial Least Squares Structural Equation Modeling (PLS-SEM) is a widely used analytical technique in social sciences, particularly suitable for complex models involving multiple latent constructs and indicators (Joseph Hair et al., 2022). In the context of this study, which seeks to investigate the factors influencing the intention to adopt mobile banking in Cambodia, PLS-SEM is applied due to its predictive power and flexibility with non-normal data. The analysis focuses on two main stages: *assessment of the measurement model (outer model)* and *assessment of the structural model (inner model)*. This section presents the results of the measurement model assessment, including construct reliability, convergent validity, and discriminant validity, to ensure the validity and reliability of the reflective constructs.

In the initial evaluation of the measurement model, some constructs exhibited unsatisfactory discriminant validity, particularly as evidenced by the HTMT ratio, where several inter-construct correlations exceeded the conservative threshold of 0.90. For instance, the HTMT values between constructs such as CSAT → BINTEN (0.922), SEQ → CSAT (0.938), and RA → PU (0.937) were significantly above the recommended cut-off, suggesting a potential overlap between theoretically distinct constructs. This high level of correlation indicated that certain indicators might not be uniquely capturing their intended latent variables, thus compromising the model's discriminant validity.

To enhance the discriminant validity and mitigate statistical artifacts, a systematic purification of the measurement model was executed. This process involved the targeted removal of specific latent variable indicators exhibiting unacceptable levels of multicollinearity and cross-construct saturation. The criterion for problematic collinearity was set rigorously, with items removed if their Variance Inflation Factor (VIF) exceeded 3.3, a conservative threshold used to detect potential instability in regression estimates. Furthermore, indicators were flagged for removal if they significantly contributed to poor discriminant validity, as evidenced by problematic scores in both the Heterotrait-Monotrait Ratio (HTMT) and the Fornell-Larcker criterion evaluations.

Structure Model Evaluation

The structural model assessment plays a crucial role in validating the hypothesized relationships among the latent constructs within the proposed framework. In this study, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to test the significance, strength, and direction of the relationships based on 15 hypotheses derived from the integration of the Technology Acceptance Model (TAM), Innovation Diffusion Theory (IDT), and Service Quality frameworks (Joe F Hair et al., 2019). The evaluation considers the standardized path coefficients (β), t-values, and p-values as illustrated in Table 3.

Table 3 Hypotheses Testing Results

Hypothesis	Paths	β	SD	T-Value	P-Value	Decision
H1	PU -> BINTEN	0.029	0.045	0.660	0.509	Not Supported
H2	PEOU -> BINTEN	0.180	0.039	4.622	0.000	Supported
H3	PEOU -> PU	0.298	0.051	5.800	0.000	Supported
H4	RA -> BINTEN	0.150	0.050	2.991	0.003	Supported
H5	RA -> PU	0.355	0.060	5.877	0.000	Supported

Hypothesis	Paths	β	SD	T-Value	P-Value	Decision
H6	COM -> BINTEN	0.208	0.052	4.017	0.000	Supported
H7	COM -> PEOU	0.654	0.036	17.979	0.000	Supported
H8	COM -> PU	0.432	0.060	7.151	0.000	Supported
H9	COMPLEX -> BINTEN	-0.034	0.026	1.300	0.194	Not Supported
H10	COMPLEX -> PEOU	-0.112	0.036	3.098	0.002	Supported
H11	TRUST -> BINTEN	0.286	0.068	4.237	0.000	Supported
H12	SEC -> BINTEN	0.066	0.050	1.315	0.189	Not Supported
H13	TRUST -> CSAT	0.716	0.025	28.732	0.000	Supported
H14a	SEQ -> TRUST	0.768	0.023	33.011	0.000	Supported
H14b	TRUST -> CSAT	0.716	0.025	28.732	0.000	Supported
H15	CSAT -> BINTEN	0.273	0.069	3.964	0.000	Supported

Source: Author's Analysis (2025)

Note: The table provides the path coefficients (β), standard deviation (SD), t-values (T), and p-values for each hypothesized relationship. Decisions on the hypotheses are based on a significance level of 0.05. Supported hypotheses indicate a statistically significant relationship. The analysis was performed using SmartPLS v. 4.1.0.4, a software tool for PLS-SEM

H1: PU → BINTEN ($\beta = 0.029$, $t = 0.660$, $p = 0.509$) – Not Supported

The hypothesis positing a positive relationship between Perceived Usefulness (PU) and Behavioral Intention (BINTEN) is *not* supported by the statistical results. With a low path coefficient ($\beta = 0.029$), an insignificant t-value (0.660), and a p-value well above the conventional threshold ($p = 0.509$), the relationship fails to reach significance. Contrary to the principles of the TAM model, it has been impossible to indicate the positive effect of Perceived Usefulness on the Behavioral Intention to adopt mobile banking.

Previous studies reached the same conclusion as in the case of Dr. Ahmed Mostafa Hamdy Rady (2023) titled “*Determinants of Customer Behavioral Intention Towards the Usage of Fin-Tech Banking Services: Evidence from Egypt*”, which analyzed data from 330 banking customers using PLS-SEM, the study found that Perceived Usefulness *did not exert a statistically significant influence* on customers' behavioral intention to use FinTech banking services. While Ana Yanovi et al. (2023) studied on “*INTENTION TO USE MOBILE BANKING SERVICE: EXAMINING THE ROLE OF EASE OF USE, PERCEIVED*

USEFULNESS AND TRUST”, which analyzed data from 160 customers using simple random sampling technique as well as using PLS-SEM technique, the results indicated that Perceived Usefulness *did not significantly influence* on Behavioral Intention. Furthermore, according to the article published by Muñoz-Leiva et al. (2017) titled “*Determinants of intention to use the mobile banking apps: An extension of the classic TAM model*” illustrated that Perceived Usefulness *did not significantly influence on the intention to use* mobile banking.

In the context of mobile banking in Cambodia, the lack of significance indicates a clear change in how users view these services. Users may no longer consider usefulness as a key reason to choose one mobile banking app over another. Instead, they might expect all apps to offer a basic level of useful features. As Cambodian users become more digitally experienced and mobile banking options continue to grow, having standard functions is now seen as normal rather than a unique benefit.

H2: PEOU → BINTEN ($\beta = 0.180$, $t = 4.622$, $p < 0.001$) – Supported

The empirical evidence supports a statistically *significant* and *positive* relationship between Perceived Ease of Use (PEOU) and Behavioral Intention (BINTEN) ($\beta = 0.180$, $t = 4.622$, $p < 0.001$), thereby confirming Hypothesis 2. This finding aligns with the core proposition of the Technology Acceptance Model (TAM) (Davis, 1989), which posits that ease of use directly enhances users’ intentions to engage with technology.

In the context of mobile banking adoption in Cambodia, this result implies that the simplicity and intuitiveness of a mobile banking app substantially contribute to a user’s willingness to adopt and continue using the mobile app. When users perceive a system as effortless to learn and operate, they are less likely to resist its usage and more likely to explore and rely on its functionalities.

H3 : PEOU → PU ($\beta = 0.298$, $t = 5.800$, $p < 0.001$) – Supported

The path coefficient from Perceived Ease of Use (PEOU) to Perceived Usefulness (PU) is both *statistically significant* and *positively* associated ($\beta = 0.298$, $t = 5.800$, $p < 0.001$), thus supporting Hypothesis 3. This result confirms a foundational tenet of the Technology Acceptance Model (TAM) (Davis, 1989), which posits that users’ perceptions of usability directly enhance their evaluation of a system’s usefulness. This relationship suggests that when mobile banking applications are *intuitive*, *user-friendly*, and *effortless* to navigate, users are more likely to assess them as valuable tools for managing their financial tasks. The ease with which users can interact with the application reduces cognitive burden, increases task efficiency, and enhances the overall experience.

In the context of digital banking in Cambodia, where digital literacy may vary among users, the significance of usability becomes even more critical. A system

that is difficult to learn or operate may discourage users from exploring its full functionalities. Conversely, systems that are designed with *local user behavior*, *language preferences*, and *visual simplicity* in mind are more likely to be embraced as useful and trustworthy solutions.

H4: RA → BINTEN ($\beta = 0.150$, $t = 2.991$, $p = 0.003$) – Supported

The relationship between Relative Advantage (RA) and Behavioral Intention (BINTEN) is *statistically significant* and *positive*, as evidenced by a path coefficient of 0.150 and a t-value of 2.991 ($p = 0.003$). This suggests that individuals who perceive mobile banking as offering superior benefits compared to traditional financial services are more likely to form an intention to adopt and use such platforms. This finding aligns with Rogers' Innovation Diffusion Theory (IDT), which posits that perceived advantage over existing solutions is one of the most powerful motivators for innovation adoption. In the context of mobile banking, these advantages may include 24/7 accessibility, faster transactions, ease of use, lower transaction costs, integration with Bakong (KHQR) systems, or the ability to conduct financial activities without visiting a physical bank branch.

H5 : RA → PU ($\beta = 0.355$, $t = 5.877$, $p < 0.001$) – Supported

The analysis confirms that Relative Advantage (RA) exerts a statistically *significant* and *positive influence* on Perceived Usefulness (PU), with a path coefficient of 0.355 ($t = 5.877$, $p < 0.001$). This result highlights that individuals who perceive distinct advantages in adopting mobile banking such as convenience, speed, cost savings, or access to real-time transactions are more likely to evaluate it as useful in improving their financial management and decision-making. This finding is consistent with the Diffusion of Innovation Theory (Rogers, 2003), which posits that the perceived superiority of an innovation over previous methods is a core determinant of its adoption. In the Cambodian context, where banking penetration is still growing and traditional banking services may not be fully inclusive, these perceived advantages take on heightened significance.

H6: COM → BINTEN ($\beta = 0.208$, $t = 4.017$, $p < 0.001$) – Supported

The statistical results confirm a *significant positive* relationship between Compatibility (COM) and Behavioral Intention (BINTEN), with a path coefficient of 0.208 ($t = 4.017$, $p < 0.001$). This indicates that when mobile banking systems are perceived as congruent with users' values, daily routines, prior experiences, and cultural expectations, users are more inclined to adopt and use such services consistently. This finding aligns with the Innovation Diffusion Theory (IDT), which posits that compatibility is a key determinant of technology adoption. From a behavioral perspective, compatibility enhances cognitive alignment, reducing perceived complexity and uncertainty. Users who see mobile banking as a natural

extension of their traditional financial behaviors are more likely to form positive attitudes toward its use, which translates into higher behavioral intention.

H7: COM → PEOU ($\beta = 0.654$, $t = 17.979$, $p < 0.001$) – Supported

The path analysis reveals a statistically significant and strongly positive relationship between Compatibility (COM) and Perceived Ease of Use (PEOU), with a standardized coefficient of 0.654 ($t = 17.979$, $p < 0.001$). This robust association suggests that when a digital banking system is aligned with users' personal values, prior experiences, and day-to-day banking habits, users are more likely to perceive the system as intuitive and effortless to navigate. This finding reinforces insights from both the Technology Acceptance Model (TAM) and Innovation Diffusion Theory (IDT). In particular, it demonstrated that the extent to which a technology fits into the user's existing lifestyle and workflows directly enhances the user's perception of its usability.

Moreover, compatibility reduces the cognitive dissonance typically associated with new technology adoption. When users feel that the platform mirrors their habitual processes such as checking balances, transferring funds, or topping up mobile, they face less psychological resistance and are more likely to engage with the system comfortably. From a strategic perspective, this finding emphasizes the importance of contextualized UX/UI design which is explored in qualitative approach.

H8 : COM → PU ($\beta = 0.432$, $t = 7.151$, $p < 0.001$) – Supported

The empirical findings demonstrate that Compatibility (COM) has a statistically *significant* and *positive effect* on Perceived Usefulness (PU) ($\beta = 0.432$, $t = 7.151$, $p < 0.001$). This result provides strong support for the theoretical proposition that when a mobile banking application is well-aligned with users' values, experiences, and lifestyle preferences, it is more likely to be perceived as useful in accomplishing financial tasks. This relationship is grounded in Innovation Diffusion Theory (IDT), which posits compatibility as a key determinant of innovation adoption. In the context of mobile banking in Cambodia, compatibility reflects how seamlessly the digital banking platform integrates into users' existing routines—such as managing finances via smartphones, making peer-to-peer transfers, or paying bills digitally. A higher sense of fit encourages users to perceive the platform as not only relevant but also practically beneficial. Moreover, this finding aligns with previous literature suggesting that technological alignment with user expectations and socio-cultural norms directly enhances usefulness perceptions (Venkatesh & Davis, 2000).

H9: COMPLEX → BINTEN ($\beta = -0.034$, $t = 1.300$, $p = 0.194$) – Not Supported

The hypothesized *negative* relationship between Complexity (COMPLEX) and Behavioral Intention (BINTEN) was *not statistically supported*, as indicated by the low path coefficient ($\beta = -0.034$), non-significant t-value (1.300), and a p-value above the conventional threshold ($p = 0.194$). This finding suggests that users' perceptions of system complexity do not significantly deter their intention to adopt mobile banking services in the Cambodian context. Although it was expected that increased complexity would reduce users' likelihood to engage with digital platforms, consistent with the Technology Acceptance Model (TAM) and Innovation Diffusion Theory (IDT), this result reveals a more nuanced user behavior. This contradicts the general understanding in literature that Complexity has positive effect on Behavioral Intention.

To support the result of this research, according to Charles Makanyeza (2017) conducted a survey of 232 bank customers in Chinhoyi, Zimbabwe titled "*Determinants of Consumers' Intention to Adopt Mobile Banking Service in Zimbabwe*", the finding illustrated that Complexity did not significant influence on Behavioral Intention to adopt mobile banking. While Ibrahim M. Al-Jabri and M. Sadiq Sohail (2012) conducted online surveys from 330 actual mobile banking users titled "*Mobile Banking Adoption: Application of Diffusion of Innovation Theory*" in Saudi Arabia, the finding indicated that Complexity has no significant effect on Behavioral Intention to adopt mobile banking in Saudi Arabia.

H10: COMPLEX \rightarrow PEOU ($\beta = -0.112$, $t = 3.098$, $p = 0.002$) – Supported

The structural path from Complexity (COMPLEX) to Perceived Ease of Use (PEOU) reveals a *significant negative relationship* ($\beta = -0.112$, $t = 3.098$, $p = 0.002$), confirming the theoretical expectation that higher complexity in a technological system diminishes users' perceptions of its ease of use. This finding is consistent with prior studies rooted in the Technology Acceptance Model (TAM) and Innovation Diffusion Theory (IDT), which posit that technological complexity acts as a barrier to adoption by increasing the cognitive effort required to understand and operate the system (Rogers (2003); Davis (1989)).

In the context of mobile banking adoption in emerging markets such as Cambodia, this result underscores a critical user experience (UX) insight: reducing system complexity is essential to improving perceived usability. Factors such as overloaded interfaces, unclear instructions, multiple authentication steps, or inconsistent navigation flows can erode users' confidence in using the platform, especially among older users or those with limited digital literacy.

H11: TRUST \rightarrow BINTEN ($\beta = 0.286$, $t = 4.237$, $p < 0.001$) – Supported

The empirical results demonstrate a statistically *significant and positive effect* of Trust (TRUST) on Behavioral Intention (BINTEN) to adopt mobile banking services ($\beta = 0.286$, $t = 4.237$, $p < 0.001$). This supports the hypothesis that users'

trust in the mobile banking platform plays a vital role in shaping their willingness to use and continue using such services. Trust encompasses user perceptions of the platform's integrity, benevolence, and competence, which collectively contribute to forming a favorable evaluation and acceptance behavior. This finding underscores the strategic imperative for financial institutions to foster trust by ensuring consistent service delivery, transparent communication, strong data protection measures, and robust system performance.

H12: SEC → BINTEN ($\beta = 0.066$, $t = 1.315$, $p = 0.189$) – Not Supported

The hypothesized direct relationship between Security (SEC) and Behavioral Intention (BINTEN) was statistically *insignificant*, as indicated by the modest path coefficient ($\beta = 0.066$), a t-value below the 1.96 threshold, and a p-value greater than 0.05. This suggests that, in the context of mobile banking adoption in Cambodia, Security does not significantly drive users' intention to adopt. In accordance with the survey of Raju Wandira and Ahmad Fauzi (2022) titled "*Effect of Security on Customer Behavioral Intentions to Use Mobile Banking*" and collected data from 100 respondents using a SmartPLS applications with SEM, the results from this finding indicated that Security did not significantly affect the Behavioral Intention. While Se Hun Lim et al. (2018) conducted a survey on titled "*Empirical Study of the Impacts of Perceived Security and knowledge on Continuous Intention to Use Mobile Banking Payment Service*" from 149 respondents, the results illustrated that Perceived Security did not significantly influence users' continual intention to use Mobile Banking. Recently, Khaira Amalia Fachrudin et al. (2025) conducted a survey titled "*Which UTAUT Elements Drive Mobile Banking Adoption in Indonesia, Despite Security and Trust Concerns?*" collected data from 482 Indonesian users, the results indicated that Security did not significant effect consumers' intention to use mobile banking. This finding provides important insight into user behavior in digital finance ecosystems. Despite the critical role of security in safeguarding personal and financial data, it appears that users perceive security as a baseline expectation, not as a key differentiator influencing adoption decisions.

H13: TRUST → CSAT ($\beta = 0.716$, $t = 28.732$, $p < 0.001$) – Supported

Trust (TRUST) *strongly influences* Customer Satisfaction (CSAT), confirming that trustworthy services enhance overall contentment with mobile banking experiences. This supports service quality literature linking reliability and integrity to satisfaction. In the context of mobile banking adoption in Cambodia, this result highlights that customers' belief in the credibility and dependability of digital banking platforms substantially elevates their satisfaction levels. When users perceive the system as trustworthy ensuring secure transactions, data privacy, and ethical handling of their financial information, they are more likely to feel content

with the service, which ultimately contributes to stronger behavioral intention and long-term loyalty. These results emphasize the strategic importance for banks and financial institutions to invest in building and maintaining trust, not only through technological safeguards but also through transparent communication, reliable support, and consistent service performance.

H14a: SEQ → TRUST ($\beta = 0.768$, $t = 33.011$, $p < 0.001$) – Supported

Service Quality (SEQ) demonstrates a strong and statistically *significant positive effect* on Trust in mobile banking services. This substantial path coefficient ($\beta = 0.768$) indicates that users' perceptions of high service quality reflected through dimensions such as responsiveness, reliability, assurance, and empathy, serve as key antecedents in fostering trust in the mobile banking environment. The exceptionally high t-value (33.011) further reinforces the robustness of this relationship. In the context of mobile banking in Cambodia, where digital trust remains a critical factor, enhancing service quality emerges as a vital strategy for building and sustaining user trust.

H14b: SEQ → CSAT ($\beta = 0.549$, $t = 17.298$, $p = 0.001$) – Supported

The results of the mediation analysis confirm that Trust plays a *partial mediating* role in the relationship between Service Quality and Customer Satisfaction. The direct effect of Service Quality on Customer Satisfaction remains statistically significant ($\beta = 0.549$, $t = 17.298$, $p < 0.001$), while the indirect effect through Trust is also significant. This suggests that Service Quality not only directly enhances user satisfaction but also builds Trust, which in turn further reinforces Customer Satisfaction. Therefore, improving service quality strengthens satisfaction both directly and by cultivating a trustworthy relationship between users and mobile banking platforms. This finding aligns with prior literature and reinforces the need for banks to prioritize service dependability, responsiveness, and empathy to drive long-term user engagement.

H15: CSAT → BINTEN ($\beta = 0.273$, $t = 3.964$, $p = 0.000$) – Supported

Customer Satisfaction (CSAT) exhibits a statistically *significant and positive influence* on Behavioral Intention (BINTEN) toward mobile banking adoption. This result underscores the pivotal role of user satisfaction in shaping future behavioral outcomes. A higher level of satisfaction with prior mobile banking experiences enhances users' likelihood to continue using and recommending the service. The finding is consistent with prior models in the field of information systems and digital service adoption, suggesting that satisfied users are more motivated to maintain their engagement with the platform, thereby reinforcing the importance of enhancing service experience to drive sustained usage intentions.

CONCLUSION

The results confirm that mobile banking adoption is a multidimensional phenomenon shaped not only by technological perceptions but also by service-related and experiential factors. Among the IDT constructs, Compatibility emerged as the most influential variable, exerting significant positive effects on Perceived Ease of Use, Perceived Usefulness, and Behavioral Intention. This indicates that users are more likely to adopt mobile banking when digital services align well with their existing lifestyles, business routines, and technological habits. In contrast, Complexity showed a significant negative effect on Perceived Ease of Use but no direct influence on Behavioral Intention, suggesting that users may tolerate moderate system complexity when perceived benefits, trust, and satisfaction are sufficiently strong.

Consistent with TAM, both Perceived Ease of Use and Perceived Usefulness significantly contributed to adoption intention, reinforcing their central role in explaining user acceptance of mobile banking. These findings highlight that intuitive system design and tangible functional benefits such as transaction speed and convenience remain essential drivers of continued usage. However, Security did not exhibit a significant direct effect on Behavioral Intention, supporting the notion that security functions as a basic expectation rather than a motivating factor. Users assume that licensed banks already provide adequate security safeguards, and therefore security alone does not differentiate adoption decisions. Moreover, Service Quality played a critical indirect role by significantly enhancing Trust and Customer Satisfaction, both of which positively influenced Behavioral Intention. In particular, Customer Satisfaction demonstrated a strong direct effect on adoption intention, confirming that cumulative positive experiences such as reliable system performance and responsive customer support are decisive in sustaining long-term usage. These results emphasize that beyond technology, high-quality service delivery remains essential even in highly digitalized banking environments.

Overall, the quantitative results validate the suitability of the integrated TAM-IDT-SERVQUAL model in explaining mobile banking adoption in a developing-country context. The findings suggest that increasing adoption in Cambodia requires a strategic focus on compatibility, usability, functional usefulness, service quality, and customer satisfaction rather than relying solely on technological advancement or security assurances. This quantitative evidence provides a strong empirical foundation for policy formulation, banking strategies, and future research on digital financial services in emerging economies.

REFERENCES

Abdul Gaffar Khan, R. P. L., Md Shahed Mahmud. (2018). Understanding the Service Quality and Customer Satisfaction of Mobile Banking in Bangladesh

- Using a SEM. *Global Business Review*. <https://doi.org/DOI:10.1177/0972150918795551>
- Ahmed Mostafa Hamdy Rady. (2023). Determinants of Customer Behavioral Intention Towards the Usage of FinTech Banking Service: Evidence from Egypt. *Journal of Information Technology*, 47(2), 387-420. <https://doi.org/10.21608/alat.2023.293010>
- ALSAMYDAI, M. J. (2014). Adaptation of the Technology Acceptance Model (TAM) to the Use of Mobile Banking Service. 3(4).
- Ana Yanovi, Liza Nora, & Salim Al Bakri. (2023). Intention to Use Mobile Banking Service Examining the Role of Ease of Use Perceived Usefulness and Trust. *International Journal of Economics, Business and Entrepreneurship*, 6(1). <https://doi.org/10.23960/ijebe.v6i1.231>
- Bile Abdisalan Nor, Husein Osman Abdullahi, & Abdi, H. (2024). Understanding Mobile Banking Adoption Determinants in Somalia: A Technology Acceptance Model Approach. *Journal of Logistics, Informatics and Service Science*, 11, 367-379. <https://doi.org/10.33168/JLISS.2024.0422>
- Charles Makanyeza. (2017). Determinants of Consumers' Intention to Adopt Mobile Banking Services in Zimbabwe. *International Journal of Bank Marketing*. <https://doi.org/10.1108/IJBM-07-2016-0099>
- Davis, F. D. (1989). Perceived Usefulness Perceived Ease of Use and User Acceptance of Information Technology. *MIS Quarterly*, 319-340. <https://doi.org/10.2307/249008>
- Fahad, & Shahid, M. (2022). Exploring the determinants of adoption of Unified Payment Interface (UPI) in India: A study based on Diffusion of Innovation Theory. *Journal of Digital Business*. <https://doi.org/10.1016/j.digbus.2022.100040>
- Farah, M. F., Hasni, M. J. S., & Abbas, A. K. (2018). Mobile-banking adoption: empirical evidence from the banking sector in Pakistan. *International Journal of Bank Marketing*, 36(7), 1386-1413. <https://doi.org/10.1108/ijbm-10-2017-0215>
- Ghani, E. K., Ali, M. M., Musa, M. N. R., & Omonov, A. A. (2022). The effect of perceived usefulness, reliability, and COVID-19 pandemic on digital banking effectiveness: Analysis Using Technology Acceptance Model. *Accounting and Sustainability*. <https://doi.org/10.3390/su141811248>
- GM Y Owusu, RA Bekoe, AA Addo-Yobo, & James Otieku. (2021). Mobile Banking Adoption among the Ghanaian Youth. *Journal of African Business*. <https://doi.org/10.1080/15228916.2020.1753003>
- Hancerliogullari Koksalmis, G., & Damar, S. (2021). An Empirical Evaluation of a Modified Technology Acceptance Model for SAP ERP System. *Engineering Management Journal*, 34(2), 201-216. <https://doi.org/10.1080/10429247.2020.1860415>
- Ibrahim M. Al-Jabri, & M. Sadiq Sohail. (2012). MOBILE BANKING ADOPTION APPLICATION OF DIFFUSION OF INNOVATION THEORY IN SAUDI ARABIA. *Journal of Electronic Commerce Research*, 13(4).
- Joe F Hair, Jeffrey Joe Risher, Marko Sarstedt, & Christian M Ringle. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*. <https://doi.org/10.1108/EBR-11-2018-0203>

- Joseph Hair, G. Tomas Hult, Christian Ringle, Marko Sarstedt, Nicholas Danks, & Ray, S. (2022). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*. <https://doi.org/https://doi.org/10.1007/978-3-030-80519-7>
- Khaira Amalia Fachrudin, Syajarul Imna Mohd Amin, Siti Ngayesah Ab Hamid, Siti Latifah, & Muhammad Arif Lubis. (2025). Which UTAUT Elements Drive Mobile Banking Adoption in Indonesia, Despite Security and Trust Concerns? *Journal of Ecohumanism*, 4, 682-693. <https://doi.org/10.62754/joe.v4i1.5867>
- Kumar, A., Dhingra, S., Batra, V., & Purohit, H. (2020). A Framework of Mobile Banking Adoption in India. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(2). <https://doi.org/10.3390/joitmc6020040>
- M.A.C Jayamali, & Gunaratna, A. G. D. L. K. (2024). Factors influencing behavioral intention to adopt mobile banking: With special refernce to Gampaha District Sri Lanka. *Journal of Banking and Finance*, 7(01), 99-114. <https://doi.org/http://doi.org/10.4038/sljbf.v5i2.34>
- Mahmoud, E. (2011). Introduction to Communication Research. 1-13.
- Matthew L. Meuter, A. L. O., Robert I. Roundtree, Mary Jo Bitner. (2000). Self-Service Technologies Understanding Customer Satisfaction with Technology-Based Service Encounters. *Journal of Marketing*, 64, 50-64. <https://doi.org/10.1509/jmkg.64.3.50.18024>
- Muñoz-Leiva, F., Climent-Climent, S., & Liébana-Cabanillas, F. (2017). Determinants of intention to use the mobile banking apps: An extension of the classic TAM model. *Spanish Journal of Marketing - ESIC*, 21(1), 25-38. <https://doi.org/10.1016/j.sjme.2016.12.001>
- Raju Wandira, & Ahmad Fauzi. (2022). TAM Approach: Effect of Security on Customer Behavioral Intentions to Use Mobile Banking. *Journal of Humanities and Social Sciences Innovation*, 2. <https://doi.org/10.35877/454RI.daengku872>
- Rogers, E. M. (1995). Diffusion of Innovations Modifications of a model for telecommunications. 25-38. https://doi.org/10.1007/978-3-642-79868-9_2
- Rogers, M. (2003). A survey of economic growth. Available at SSRN 410979.
- Samer Elhajar, & Ouaida, F. (2020). An analysis of factors affecting mobile banking adoption. *International Journal of Bank Marketing*, 352–367. <https://doi.org/10.1108/IJBM-02-2019-0055>
- Se Hun Lim, Dan J. Kim, Yeon Hur, & Kunsu Park. (2018). An Empirical Study of the Impacts of Perceived Security and Knowledge on Continuous Intention to Use Mobile Fintech Payment Services. *International Journal of Human-Computer Interaction*. <https://doi.org/10.1080/10447318.2018.1507132>
- Ubam, Elizabeth., Hipiny, Irwandi., & Ujir, Hamimah. (2021). *User Interface and User Experience (UI & UX) Analysis & Design of Mobile Banking App for Senior Citizens A Case Study in Sarawak Malaysia* International Conference on Electrical Engineering and Informatics (ICEEI), Kuala Terengganu, Malaysia.
- Usanti, T. P., Sujatmiko, A., & Kurniawan, A. (2024). TRADEMARK RIGHTS AS CREDIT COLLATERAL TO STRENGTHEN THE SELF-RELIANCE OF MSMEs. *Journal of Social Sciences and Humanities*, 3(2), 12–24. <https://doi.org/10.56943/jssh.v3i2.534>

- Vannak, K., Hong, D. S., & Rady, D. C. (2025). FACTORS INFLUENCING USER SATISFACTION AND CONTINUANCE INTENTION IN MOBILE PAYMENT APPS IN CAMBODIA: A STRUCTURED LITERATURE REVIEW. *Journal of Social Sciences and Humanities*, 74–104. <https://doi.org/10.56943/jssh.v4i3.814>
- Venkatesan, V. (2025). Revolutionary Trends in Mobile Banking Technology and the Influence of Digital Financial Literacy on Consumer Adoption in the United States. *Journal of Information Technology*. <https://doi.org/10.36838/v7i2.56>
- Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186-204. <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Waleed Mugahed Al-Rahmi, N. Y., Ahmed A. Aldraiweesh, Mahdi M. Alamri, Nada Ali Aljarboa, Uthman Alturki, & Abdulmajeed A. Aljeraiwi. (2019). Integrating Technology Acceptance Model With Innovation Diffusion Theory An Empirical Investigation on Students' Intention to Use E Learning System. 7. <https://doi.org/10.1109/ACCESS.2019.2899368>