APSSHS

Academic Publications of Social Sciences and Humanities Studies
2024, Volume 4, Page No: 32-41
Available online at: https://apsshs.com/

Journal of Applied Organizational Systems and Behavior

Determinants Influencing the Adoption of Mobile Banking Channels Among Generation Z in Vietnam

Oliver Hughes[1], Sophie Ward[2], James Fletcher[1], Hannah Wright[3]*

1. Department of Organizational Behavior, School of Management, University of Bath, Bath, United Kingdom.
2. Department of Organizational Studies, School of Social Sciences, University of York, York, United Kingdom.
3. Department of Human Resources and Leadership, School of Management, University of Exeter, Exeter, United Kingdom.

Abstract

This research explores the primary factors that impact Generation Z's intention to adopt mobile banking services offered by commercial banks in Vietnam. The study introduces a conceptual framework where the dependent variable is the "decision to use," influenced by six independent variables: (i) ease of use, (ii) functional variety, (iii) security and privacy, (iv) perceived risk, (v) attractiveness of the platform, and (vi) social influence. Data were collected through a survey yielding 200 valid responses, which were then processed and analyzed using SPSS 20.0. Findings indicate that among the six factors examined, two have a particularly strong influence on Generation Z's decision to use mobile banking. Drawing from these results, the study offers recommendations aimed at encouraging greater adoption of mobile banking services, thereby supporting the advancement of financial inclusion in Vietnam.

Keywords: Mobile banking, Generation Z, Adoption factors, Banking distribution channels

How to cite this article: Hughes O, Ward S, Fletcher J, Wright H. Determinants influencing the adoption of mobile banking channels among generation Z in Vietnam. J Appl Organ Syst Behav. 2024;4:32-41. https://doi.org/10.51847/SX76h7P1dK

Received: 11 March 2023; **Revised:** 29 May 2023; **Accepted:** 01 June 2023
Corresponding author: Hannah Wright
E-mail ✉ hannah.wright@outlook.com

Introduction

As of May 2021, Vietnam ranks among the countries with the highest number of smartphone users globally [1]. In particular, Vietnam was ranked 9th worldwide in 2020 for smartphone penetration, with a usage rate of 63.1%, significantly surpassing other nations in the region. The year 2020 also marked a notable rise in non-cash payments supported by mobile banking, coinciding with Vietnam's first recorded case of COVID-19 early that year. Vietnam, with its large population, stable political and economic environment, and promising economic growth, represents a highly attractive market [2]. According to the latest United Nations data, Vietnam's population was approximately 94.2 million as of April 2021. Notably, by 2021, Generation Z—those born into the digital era—had grown larger than Generation Y (Millennials), who were born between the early 1980s and late 1990s. This generation is expected to comprise about one-third of Vietnam's working-age population [3]. Consequently, banks must identify key factors influencing Gen Z's adoption of mobile banking and develop strategies to attract and retain this demographic.

This study aims to identify the determinants affecting Generation Z's decision to adopt mobile banking services in Vietnam and to examine how these factors influence their overall mobile banking experience. The motivation for this research stems from a lack of comprehensive, statistically grounded studies addressing mobile banking usage among Vietnamese youth, despite the sector's growing importance. Given that Generation Z will soon dominate the labor market, it is essential to

understand the unique context of Vietnam and how it shapes their mobile banking behaviors. This research thus focuses on key determinants relevant to this demographic within the Vietnamese market.
The paper is structured as follows: the literature review provides insights into mobile banking, distribution channel trends, characteristics of Generation Z, influencing factors on their mobile banking adoption in Vietnam, and hypothesis development. This is followed by a detailed presentation of the research methodology, data analysis, and key findings. The final sections discuss the results, implications, and study limitations.

Literature review

Mobile banking

Mobile banking refers to a service channel through which customers interact with their banks using mobile devices such as smartphones or personal digital assistants. It is considered a subset of electronic banking and an extension of online banking, distinguished by its unique features [4]. Essentially, mobile banking enables customers to remotely access banking services via mobile devices connected to wireless telecommunications networks. Typical functions include checking account balances and transaction histories, transferring funds, paying bills, trading stocks, and managing financial portfolios.
Barnes and Corbitt (2003) describe mobile banking as an outcome of advancements in telecommunications, providing customers with a new convenient access point to banking services [5]. It is a form of e-commerce wherein banks interact with customers through mobile applications, allowing users to access a range of services efficiently. Mobile banking services are delivered via multiple channels, including Short Messaging Service (SMS), Interactive Voice Response (IVR), mobile applications, and Wireless Application Protocol (WAP), among others. Banks leverage these mobile innovations to offer cost-effective and profitable services, enhancing operational efficiency and fostering customer satisfaction and loyalty.
Mobile banking applications installed on internet-enabled mobile devices (using technologies such as GPRS, Wi-Fi, or 3G) empower customers to conduct online banking transactions conveniently at any time and place. This accessibility saves time and reduces costs, making mobile banking an increasingly preferred banking channel.

Mobile banking trends in Vietnam

The popularity of mobile banking is rapidly growing in Vietnam, with an expanding user base and increasing awareness. According to government statistics, as of January 2020, approximately 68.17 million people in Vietnam used internet services. Mobile banking adoption experienced a remarkable 200% growth rate, with about 30 million people actively using mobile payment systems daily [6]. In 2020, the State Bank of Vietnam reported nearly 374 million internet-based payment transactions amounting to over 22.4 million billion Vietnamese dong (VND), reflecting a 25.5% increase in transaction value and an 8.3% increase in transaction volume compared to 2019.
Moreover, payment transactions conducted via mobile phones reached nearly 918.8 million, with a total value of around 9.6 million billion VND, representing substantial year-on-year growth of 125.4% in value and 123.9% in transaction volume. Currently, 78 banks in Vietnam provide internet banking services, and 49 banks offer mobile banking applications, demonstrating significant banking sector investment in mobile technology adoption.

Generation Z (Gen Z)

Duong *et al*. (2021) describe Generation Z as the cohort born between 1997 and 2012, representing young Centennials whose characteristics and lifestyles are still being explored and understood. Compared to previous generations, Generation X (born 1961–1981) is often associated with simplicity and frugality, while Generation Y (born 1981–1996), also known as the Technological and Confident Generation, exhibits different traits. Each generational group tends to display distinct personality traits and perspectives shaped by approximately 15-year temporal intervals, leading to notable differences in thinking and living styles [7].
The early decades of the 21st century have witnessed the rise of Generation Z, characterized as a diverse, hyperconnected, and dynamic group of influencers who significantly impact brands, industries, and digital platforms [8, 9]. This generation is considered ideal for brand representation and generating positive online content.
Although Gen Z comprises only about 20% of Vietnam's population and currently has the lowest income level [8], its members have grown up amid rapid technological advancement, including widespread access to the internet, social networks, and smart devices such as smartphones and tablets. Their awareness, skillset, and opportunities for development are vast, as they have embraced technology from a very young age. Gen Z's daily activities—including learning, socializing, and entertainment—are heavily influenced by modern technology, differentiating them significantly from previous generations. By contrast, Generation Y, their parents' generation, was born in the 1980s and 1990s and similarly integrated internet technology and smartphones early in life, with 95% of teenagers in this group owning phones and 45% being continuously online [10, 11].
Because of their innovative mindset and openness to change, Generation Z is viewed as a key customer segment driving digital transformation, especially in sectors like banking where mobile banking services are increasingly integrated into

product offerings. Effectively engaging this generation represents a major opportunity for the banking industry's future growth [12]. While Gen Z shares some behavioral similarities with other individual consumers, their consumption and usage patterns are distinctly influenced by their developmental environment and lifestyle, necessitating tailored approaches to understand their unique preferences.

For this study, the survey targets individuals born between 1997 and 2012, currently aged 10 to 25 years (as of 2022). In Vietnam, Gen Z accounts for approximately 25% of the labor force, which equates to around 15 million people [8].

Literature review summary

The findings from various literature reviews have been compiled and presented in **Table 1** below:

Table 1. Summary of Literature Review Findings

Sources	Theoretical/Conceptual Framework	Conclusions
Davis (1989); Shaikh & Karjaluoto (2015); Shaun (2021) [10, 13, 14]	Perceived Ease of Use: The simplicity of performing a task with technology influences the user's attitude toward it. Mobile banking adoption often relies on the Technology Acceptance Model and its variants, with internet technology and smartphones being integral to Gen Z's lifestyle.	The user-friendly nature of mobile phones positively impacts Gen Z's inclination to adopt mobile banking channels.
Davis (1989); Akturan (2012); Mostafa & Eneizan (2018); Bui *et al*. (2020) [2, 13, 15, 16]	Functional Diversity: The extent to which a person believes technology enhances their performance. The perceived usefulness of diverse functionalities positively influences mobile banking adoption.	Functional diversity encourages Gen Z to choose mobile banking channels due to its positive effect on usability.
Yeow *et al*. (2008); Bui *et al*. (2020) [2, 17]	Perceived Trust and Security: The belief that mobile banking is reliable and protects user privacy has a significant positive effect on adoption intentions.	The level of security and confidentiality in mobile banking channels positively influences Gen Z's decision to use them.
Kabir (2013) [18]	Risk Factors: Privacy, social, financial, and time-related risks influence the decision to adopt mobile banking.	Perceived risks, including privacy and financial concerns, are significant barriers to Gen Z's use of mobile banking channels.
Mostafa & Eneizan (2018); Alghareeb (2022); Nguyen & Phan (2022) [16, 19, 20]	User Perceptions and Aesthetics: Factors such as perceived usefulness, risk, social influence, and appealing design impact the intent to adopt mobile banking.	Attractive design and strategic bank approaches positively influence Gen Z's adoption of mobile banking, with social influence playing a key role.

Source: Compiled by the researchers

Description: **Table 1** summarizes key findings from literature reviews on mobile banking adoption, focusing on Gen Z. It includes the theoretical or conceptual frameworks and conclusions drawn from various studies. The frameworks cover perceived ease of use, functional diversity, trust and security, risk factors, and user perceptions, including social influence and design aesthetics. Each source highlights factors that either encourage or hinder Gen Z's decision to use mobile banking channels.

Theoretical framework and research models

To understand the factors influencing Generation Z's behavior in using services like mobile banking, this research draws on three foundational theories: the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB), and the Technology Acceptance Model (TAM).

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen in 1975, aims to predict an individual's behavioral intention based on two main components: attitudes and subjective norms. Unlike focusing on attitudes toward a product or service, TRA emphasizes consumer behavior-oriented attitudes. Attitude toward behavior refers to whether an individual evaluates performing a specific behavior positively or negatively. If a person believes that engaging in the behavior will bring beneficial outcomes, they tend to form a positive attitude and proceed with the behavior. Conversely, if the behavior is believed to lead to negative results, a negative attitude forms, and the behavior is avoided. Subjective norm involves the perceived social pressure from significant others or groups to perform or avoid the behavior. Behavioral intention, as defined by Ajzen (1991) [21], represents an individual's readiness or willingness to perform a behavior, shaped by their attitude and subjective norms. The stronger and more favorable the attitude, the more likely the behavior will be performed. Behavior is the actual observable action taken by the individual in a specific context.

Ajzen's Theory of Planned Behavior (TPB), introduced in 1991, extends TRA by addressing its limitation that human behavior is entirely rational and controlled. TPB adds perceived behavioral control, emphasizing that individuals may not always have

full control over their actions. According to TPB, behavioral intention is influenced by attitude toward the behavior, normative beliefs, subjective norms, and perceived behavioral control. Attitude toward the behavior reflects an individual's favorable or unfavorable evaluation of performing the behavior. Normative belief refers to the perception of societal expectations about whether the individual should perform the behavior, while subjective norm captures the influence of important people in the individual's life on their decision-making. Perceived behavioral control involves the individual's belief in their ability to perform the behavior, including perceived facilitators and barriers. It reflects how easy or difficult the behavior is perceived to be, affecting both intention and actual behavior.

The Technology Acceptance Model (TAM), developed by Davis in 1989, builds on TRA to specifically explain user acceptance of new technologies. TAM highlights two primary perceptions that drive technology usage: perceived usefulness and perceived ease of use. Perceived usefulness refers to the degree to which a person believes that using a particular technology will improve their job performance or efficiency. Perceived ease of use relates to the belief that using the technology will require minimal effort, influencing the user's attitude toward adopting it.

Together, these models provide a comprehensive framework for analyzing the key determinants shaping Generation Z's adoption and usage behavior of mobile banking services in Vietnam.

Proposing a conceptual framework

Drawing on established theories and models from both local and international literature—such as those by Singh and Srivastava (2020), Yu and Chian-Son (2012), Foon and Fah (2011), Sripalawat and Ngarmyarn (2011), and Zhou *et al*. (2010)—we propose employing the Technology Acceptance Model (TAM) as the foundational framework [22–26]. After carefully distilling and selecting the most relevant determinants from these studies, we constructed the research framework illustrated in **Figure 1** below.

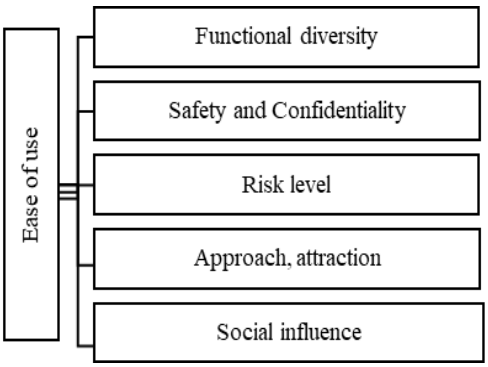

Figure 1. Proposed conceptual framework

Simplicity of use

Davis (1989) [13] identified two crucial beliefs that influence whether someone embraces a technology: first, the expectation that the technology will help them perform better and more efficiently; second, how simple or straightforward it feels to use that technology. If users find the system easy and hassle-free, they tend to develop a more positive outlook toward it. Supporting this, Shaikh and Karjaluoto (2015) [14] found that although mobile banking adoption varies globally, the core motivators remain consistent — how well the technology fits into users' lifestyles and devices, its perceived benefits, and overall attitude toward it. Shaun (2021) points out that smartphones and the internet are practically inseparable from Generation Z's daily lives, with a vast majority owning smartphones and many staying online almost all the time [10]. Reflecting these observations, we put forward this hypothesis:

H1: Generation Z's willingness to use mobile banking increases when they perceive their mobile phones to be easy to use.

Variety of functions

In Vietnam, mobile banking has become more accessible due to partnerships between banks and telecom companies, yet many people remain hesitant to adopt it [2]. This reluctance highlights the need to identify factors influencing user acceptance. Functional diversity means how much a user believes that a technology can provide multiple useful features to improve their experience and outcomes. Previous research confirms that offering diverse, practical functions encourages users to engage with mobile banking [15, 16]. Hence, we propose:

H2: The broader the range of functions available on mobile banking apps, the more likely Generation Z will decide to use these services.

Trust and privacy

Trustworthiness and privacy protection are critical when it comes to mobile banking. Users need to feel confident that their information is safe and their transactions secure. Yeow *et al*. (2008) describe this as the level of trust users place in the safety and confidentiality of mobile banking systems [17]. Echoing this, Bui *et al*. (2020) demonstrate that feeling secure significantly boosts users' intentions to use mobile banking [2]. Accordingly, we state:

H3: Generation Z's choice to use mobile banking is positively influenced by how secure and confidential they perceive these services to be.

Perceived risks

Mobile banking adoption can be hindered by concerns over various risks. Kabir (2013) found that fears related to privacy breaches, social judgments, financial loss, and time wastage discourage users from embracing mobile banking in developing countries. These risks create barriers that reduce the likelihood of adoption [18]. Thus, our hypothesis is:

H4: Higher perceived risk negatively impacts Generation Z's willingness to use mobile banking channels.

Methods of approach and attraction

Recent studies focusing on undergraduate students at Kuwait University [16, 19] identified several factors that influence the adoption of mobile banking distribution channels. These factors include perceived usefulness, perceived risk, social influence, and the visual appeal or design aesthetics of the service, all of which contribute to encouraging users' intentions to adopt mobile banking. Based on these findings, we propose the following hypotheses:

H5: The methods banks use to engage and attract Generation Z have a positive impact on their decision to adopt mobile banking.

H6: Social influence plays a significant role in shaping Generation Z's choice to use mobile banking services.

Materials and Methods

Drawing from both domestic and international literature, the research team selected relevant factors to develop a conceptual framework **(Figure 1)** that explains the determinants influencing Generation Z's mobile banking usage.

The survey targeted Gen Z individuals residing and working in Vietnam who use mobile banking. Additionally, respondents were drawn from diverse industries and backgrounds, considering factors such as age, education, and income. Although the primary focus was on current mobile banking users, the study also included non-users who may consider adopting mobile banking in the future. This approach aimed to provide a comprehensive dataset for analysis and to offer actionable insights for Vietnamese banks.

A total of 200 valid responses were collected, meeting the sampling criteria established by Bollen (1998) and Hair *et al*. (1998), which recommend a minimum sample size of five times the number of observed variables (minimum 150).

Attitudes and perceptions of participants were measured using a 5-point Likert scale ranging from (1) Strongly Disagree to (5) Strongly Agree. The collected data were analyzed using SPSS software through reliability testing, exploratory factor analysis (EFA), Kaiser-Meyer-Olkin (KMO) test, correlation analysis, and multivariate regression. The analysis focused on six independent variables—ease of use, functional diversity, safety and confidentiality, risk level, bank approach and attraction methods, and social influence—and their effect on the dependent variable: Generation Z's use of mobile banking. Detailed results are presented in **Table 2**.

Table 2. Factors Influencing Gen Z's Adoption of Mobile Banking

Variables and Attributes	Sources
Ease of Use (EU)	
EU1: Straightforward and user-friendly registration and service activation processes	Davis (1989); Shaikh & Karjaluoto (2015); Shaun (2021) [10, 13, 14]
EU2: Fast response and processing times	
EU3: Easy to learn and master quickly	
EU4: Facilitates accurate and simple transactions	
Functional Diversity (FD)	
FD1: Offers core services like transfers, payments, cards, savings, loans, and mobile top-ups	Bui *et al*. (2020) [2]
FD2: Includes advanced services such as online savings, investments, and booking for trains or flights	
FD3: Frequently updates with innovative transaction authentication methods	
FD4: Incorporates features to alert users about potential risks	
FD5: Provides practical and valuable supplementary features for users	

Safety and Confidentiality (SC)	
SC1: Ensures high levels of security and privacy	Yeow *et al*. (2008); Bui *et al*. (2020) [2, 17]
SC2: Offers clear, comprehensive guidelines on safety measures for users	
SC3: Sends notifications and confirmations after each transaction	
SC4: Protects personal information and accounts from third-party disclosure	
SC5: Minimizes operational issues and financial losses during service use	
Risk Level (RL)	
RL1: Errors in transferring funds to incorrect accounts or amounts	Kabir (2013); Al-Jabri & Sohail (2012) [18, 27]
RL2: Frequent system maintenance or overloading issues	
RL3: Vulnerability of associated intermediaries to hacking and data breaches	
RL4: Concerns related to legal regulations for mobile banking services	
RL5: Issues with connection failures or internet disruptions	
Methods of Attraction and Approach (MA)	
MA1: Appealing brand and app interface design	Akturan & Tezcan (2012) [28]
MA2: Personalized service options (e.g., choosing account numbers or nicknames)	
MA3: Includes engaging features like horoscopes or zodiac signs	
MA4: Expands partnerships to offer more customer incentive programs	
MA5: Utilizes diverse, trend-aligned advertising and marketing strategies	
Social Influence (SI)	
SI1: Widespread use by others encourages personal adoption	Yu (2012); Danyali (2018); Singh & Srivastava (2020) [22, 23, 29]
SI2: Recommendations from friends or family increase usage likelihood	
SI3: Influence from news and social media impacts adoption decisions	

Description: **Table 2** outlines the factors influencing Gen Z's use of mobile banking, categorized into six variables: Ease of Use, Functional Diversity, Safety and Confidentiality, Risk Level, Methods of Attraction and Approach, and Social Influence. Each variable includes specific attributes that describe its role in adoption, with corresponding sources from prior research, such as Davis (1989), Shaikh & Karjaluoto (2015), Bui *et al*. (2020), and others [2, 13, 14]. The table highlights key elements that either promote or hinder Gen Z's engagement with mobile ban

Results and Discussion

Survey sample characteristics

The study gathered responses from 200 participants. Among them, 123 were female, representing 61.5% of the sample, while 77 were male, accounting for 38.5%. The majority of respondents, 76% (152 individuals), were between 19 and 22 years old. A smaller portion, 21% (42 individuals), fell within the 23 to 25 age range, and only 3% (6 individuals) were between 15 and 18 years old.

Regarding occupation, students and pupils formed the largest group, making up 69% of the sample. Office workers accounted for 20.5%, while the remaining 10.5% were employed in other sectors.

In terms of income, 49.5% of participants (99 individuals) reported earning less than 3 million VND per month. Meanwhile, 19.5% (39 individuals) earned between 3 to 5 million VND, 21.5% (43 individuals) had a monthly income between 5 to 10 million VND, and 9.5% (19 individuals) reported an income of over 10 million VND.

Scale accreditation

To assess the reliability of the measurement scales, Cronbach's Alpha coefficient was used. This method evaluates the internal consistency of the observed variables within each factor.

In this research, Cronbach's Alpha was applied in conjunction with exploratory factor analysis (EFA) to identify and remove unsuitable variables that might lead to the formation of artificial or unrelated factors.

According to the standard set by Taber (2018), a Cronbach's Alpha value above 0.6 is considered acceptable for scale reliability [30]. As shown in **Table 3**, all measurement scales used in the study surpassed this threshold, indicating that the instruments were sufficiently reliable for further analysis.

Table 3. Reliability test of independent variables

Variables	Number of measurement items	Cronbach's Alpha

EU	4	0.916
FD	5	0.901
SC	5	0.950
RL	5	0.906
MA	5	0.879
SC	3	0.828

All variables demonstrated a Cronbach's alpha coefficient greater than 0.7 and corrected item-total correlations above 0.3, indicating a strong level of internal consistency. Therefore, all items met the reliability criteria, and none were excluded from the measurement scale.

Exploratory factor analysis (EFA)

To assess the suitability of using exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were conducted. After confirming sampling adequacy and the presence of significant correlations among variables, EFA was performed using principal component analysis with varimax rotation. A minimum factor loading of 0.5 was applied to identify meaningful factor contributions. The results are summarized in **Table 4**.

Table 4. Legalon drug effect on kidney functions

KMO and Bartlett's Test		
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.955
Bartlett's Test of Sphericity	Approx. Chi-Square	4,574.358
	Df	276
	Sig.	.000

From **Table 4**, the KMO value of 0.955 (which falls between 0.5 and 1) indicates that the data is highly suitable for factor analysis. Additionally, Bartlett's Test of Sphericity produced a value of 4574.358 with a significance level (Sig) of 0.000, which is below the conventional threshold of 0.05. This confirms that the variables are sufficiently correlated and appropriate for exploratory factor analysis.

Furthermore, the results presented in **Table 5** show that all factor loadings exceed the minimum threshold of 0.5. According to the criteria set by Anderson and Gerbing (1988), the significance level (p-value) of 0.000 confirms that the measurement model demonstrates strong construct validity across the six identified factors.

Table 5. EFA results for independent variables

Attributes	**Components and factor loadings**					
	1	**2**	**3**	**4**	**5**	**6**
EU1	0.863					
EU2	0.847					
EU3	0.781					
EU4	0.775					
FD1		0.722				
FD2		0.859				
FD3		0.833				
FD4		0.821				
FD5		0.757				
SC1			0.757			
SC2			0.861			
SC3			0.783			
SC4			0.781			
SC5			0.779			
RL1				0.759		
RL2				0.881		
RL3				0.827		
RL4				0.819		
RL5				0.766		
MA1					0.838	
MA2					0.826	
MA3					0.799	

MA4		0.687	
MA5		0.785	
SC1			0.876
SC2			0.812
SC3			0.833
DC1	0.889		
DC2	0.853		
DC3	0.848		

Analysis of regression is presented in **Table 6**, below:

Table 6. Regression analysis results

Variables	Unstandardized coefficients		Standardized coefficients	t-value	Sig. (p_value)	VIF	Findings
	B	Std. Error	β				
Constant	-0.594	0.22		-2.69	0.008		
EU	0.224	0.034	0.29	6.629	<0.001*	1.228	Accept H1
FD	0.19	0.031	0.265	6.065	<0.001*	1.225	Accept H2
SC	0.208	0.047	0.216	5.178	<0.001*	1.117	Accept H3
RL	-0.266	0.049	-0.253	-5.409	<0.001*	1.401	Accept H4
MA	0.245	0.045	0.192	4.454	<0.001*	1.197	Accept H5
SC	0.244	0.035	0.153	5.209	<0.001*	1.508	Accept H6

As explained in **Table 6**, the following regression model was tested by using SPSS:

$$DCi = \beta 0 + \beta_1 EUi + \beta_2 FDi + \beta_3 SCi + \beta_4 RLi + \beta_5 MAi + \beta_6 SCi + \varepsilon \quad (1)$$

According to the regression results in **Table 6**, the variance inflation factor (VIF) values for all independent variables remain below the threshold of 5. This suggests that correlations among the predictors are not strong enough to cause concern, and thus multicollinearity does not significantly influence the results of the regression analysis.

The findings also indicate that five out of six dimensions related to mobile banking service quality have a meaningful and positive effect on how satisfied Gen Z users in Vietnam feel about these services. On the other hand, one dimension negatively influences their satisfaction. These conclusions are drawn with a 95 percent level of confidence. Overall, the model accounts for 58.8 percent of the variation in the banks' information infrastructure, as reflected by an adjusted R^2 value of 0.588.

Hypothesis H1 is confirmed by the data: the easier it is to use a mobile phone, the more likely Gen Z individuals are to adopt mobile banking platforms ($t = 6.629$, $p < 0.001$). This aligns with prior research by Davis (1989), Shaikh and Karjaluoto (2015), and Shaun (2021), suggesting that improving usability increases the likelihood of adoption [10, 13, 14].

In regard to H2, functional diversity appears to positively influence Gen Z's decisions to use mobile banking, although the relationship is not statistically significant ($t = 6.065$, $p < 0.001$). Nevertheless, the trend is consistent with earlier studies such as those by Davis (1989), Mostafa and Eneizan (2018), and Akturan (2012), which highlight that offering a variety of functions can help attract younger users [13, 15, 16].

The study also supports H3: the perceived safety and privacy of mobile banking services play an important role in Gen Z's decision to use them ($t = 5.178$, $p < 0.001$). This finding is supported by the work of Yeow *et al*. (2008) and Bui *et al*. (2020), both of which emphasize the importance of trust in mobile financial services [2, 17].

In contrast, perceived risk emerges as the only factor with a significant negative influence, supporting H4 ($t = -5.409$, $p < 0.001$). This is in line with findings from Kabir (2013) and Al-Jabri and Sohail (2012), who similarly found that concerns over risk can deter younger users from using mobile banking [18, 27].

Lastly, the attractiveness of the app ($t = 4.454$, $p < 0.001$) and social influence ($t = 5.209$, $p < 0.001$) both significantly and positively impact mobile banking adoption, providing support for H5 and H6. These insights reflect earlier work by Alghareeb (2022), who identified that visual appeal, social encouragement, perceived benefits, and risk perceptions all shape user behavior in digital banking [19].

Conclusion

This study found that Gen Z's decision to use mobile banking services in Vietnam is mainly influenced by two key factors: perceived risk and the appeal or attractiveness of mobile banking.

Risk plays a major role in shaping Gen Z's willingness to adopt mobile banking. Since mobile banking depends heavily on technology and requires users to actively manage their financial transactions, Gen Z users are particularly cautious. They are aware of potential issues such as incorrect transfers, unauthorized access, or data breaches, which may occur due to weak

security or third-party involvement. In addition, the lack of clear legal protections surrounding mobile banking services increases their concerns. Having grown up with technology, Gen Z is familiar with both its benefits and the risks, leading them to pay close attention to security features and system reliability. As a result, Vietnamese banks must work to strengthen internal controls and digital safeguards to reduce these risks and build trust [31–33].

The second major factor is the way mobile banking is presented and promoted. Gen Z, shaped by the rise of social media and digital content, is drawn to engaging and modern experiences. The findings show that this generation favors mobile banking platforms that are visually appealing, creatively designed, and aligned with their personal style. Features that allow personalization, like choosing a special account number or adding interactive tools such as horoscopes or trend-based forecasts, make the service more attractive. For this reason, mobile banking providers in Vietnam should focus on creating marketing campaigns that highlight unique, trendy features and deliver a user experience that resonates with Gen Z values. At the same time, strong IT security systems remain essential to support this approach.

It's important to note that this study used a convenience sampling method, which may limit the ability to generalize the results. Future research should aim to include a broader and more diverse sample and consider additional influencing factors. Doing so will help generate more comprehensive insights and inform more effective strategies for commercial banks in Vietnam.

Acknowledgments: None

Conflict of interest: None

Financial support: None

Ethics statement: None

References

1. Statista. Smartphone market in Vietnam - statistics & facts. Statista. 2022. Available from: https://www.statista.com/topics/9168/smartphone-market-in-vietnam/#topicHeader__wrapper
2. Bui V, Vo H, Ngo T. An empirical analysis of mobile banking adoption in Vietnam. Teoria & Sociedade. 2020;14(37):3365-3393. doi:10.21171/ges.v14i37.3078
3. PWC. How digital ready is Generation Z? PWC Vietnam. 2021. Available from: https://www.pwc.com/vn/en/publications/2021/pwc-vietnam-digital-readiness-genz-en.pdf
4. Laukkanen T, Pasanen M. Mobile banking innovators and early adopters: how they differ from other online users? J Financ Serv Mark. 2008;13(2):86-94. doi:10.1057/palgrave.fsm.4760077
5. Barnes SJ, Corbitt B. Mobile banking: concept and potential. Int J Mob Commun. 2003;1(3):273-288. doi:10.1504/IJMC.2003.003494
6. General Statistic Office. Statistical summary book of Vietnam. General Statistic Office. 2020. Available from: https://www.gso.gov.vn/wp-content/uploads/2021/07/Nien-giam-Tom-Tat-2020Ban-quyen.pdf
7. Nguyen M, Phung L, Pham K. Productivity growth and job reallocation in the Vietnamese manufacturing sector. J Econ Dev. 2019;21(2):172-190. doi:10.1108/JED-07-2019-0019
8. Nguyen MP, Hoang TTH, Phan A, Tran MD. Disparities in banking information transparency in Southeast Asian countries. Corp Gov Organ Behav Rev. 2022;6(2):236-246. doi:10.22495/cgobrv6i2sip8
9. Bach TN, Ly DH, Nguyen VH, Le T. Sub-national union coverage and the youth's labor market outcomes: evidence from a national survey in Vietnam. J Econ Dev. 2022;24(2):112-126. doi:10.1108/JED-02-2021-0025
10. Shaun P. DITTO for Gen Z: A framework for leveraging the uniqueness of the new generation. Bus Horiz. 2021;64(5):599-610. doi:10.1016/j.bushor.2021.02.021
11. Gatsi JG, Appiah M. Population growth, income growth and savings in Ghana. J Econ Dev. 2020;22(2):281-296. doi:10.1108/JED-12-2019-0078
12. Adeniyi O, Ajayi PI, Adedeji AA. Education and inclusive growth in West Africa. J Econ Dev. 2021;23(2):163-183. doi:10.1108/JED-04-2020-0036
13. Davis F. Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Q. 1989;13(3):319-340. doi:10.2307/249008
14. Shaikh AA, Karjaluoto H. Mobile banking adoption: a literature review. Telemat Inform. 2015;32(1):129-142. doi:10.1016/j.tele.2014.05.003
15. Akturan U. Mobile banking adoption of the youth market. Mark Intell Plan. 2012;30(4):444-459. doi:10.1108/02634501211231928

16. Mostafa AAN, Eneizan B. Factors affecting acceptance of mobile banking in developing countries. Int J Acad Res Bus Soc Sci. 2018;8(1):340-351.
17. Yeow PH, Yuen YY, Tong DYK, Nina L. User acceptance of online banking service in Australia. Commun IBIMA. 2008;1(22):191-197.
18. Kabir MR. Factors influencing the usage of mobile banking: incident from a developing country. World Rev Bus Res. 2013;3(3):96-114.
19. Alghareeb S. Mobile banking adoption among undergraduate students in Kuwait University. Open Access Libr J. 2022;9(6):1-13. doi:10.4236/oalib.1106458
20. Nguyen MP, Phan A. Customer's satisfaction about mobile banking distribution channel in Vietnamese commercial banks. J Distrib Sci. 2022;20(8):69-79. doi:10.15722/JDS.20.08.202208.69
21. Ajzen I. The theory of planned behavior. Organ Behav Hum Decis Process. 1991;50(2):179-211. doi:10.1016/0749-5978(91)90020-T
22. Singh S, Srivastava RK. Understanding the intention to use mobile banking by existing online banking customers: an empirical study. J Financ Serv Mark. 2020;25(3):86-96. doi:10.1057/s41264-020-00074-w
23. Yu CS. Factors affecting individuals to adopt mobile banking: empirical evidence from the UTAUT model. J Electron Commer Res. 2012;13(2):104.
24. Foon YS, Fah BCY. Internet banking adoption in Kuala Lumpur: an application of UTAUT model. Int J Bus Manag. 2011;6(5):161-167.
25. Sripalawat J, Thongmak M, Ngarmyarn A. M-banking in metropolitan Bangkok and a comparison with other countries. J Comput Inf Syst. 2011;51(3):67-76.
26. Zhou T, Lu Y, Wang B. Integrating TTF and UTAUT to explain mobile banking user adoption. Comput Hum Behav. 2010;26(4):760-767.
27. Al-Jabri IM, Sohail MS. Mobile banking adoption: application of diffusion of innovation theory. J Electron Commer Res. 2012;13(4):379-391.
28. Akturan U, Tezcan N. Mobile banking adoption of the youth market: perceptions and intentions. Mark Intell Plan. 2012;30(4):444-459. doi:10.1108/02634501211231928
29. Danyali AA. Factors influencing customers' change of behaviors from online banking to mobile banking in Tejarat Bank, Iran. J Organ Change Manag. 2018;31(6):1226-1233. doi:10.1108/JOCM-07-2017-0269
30. Taber KS. The use of Cronbach's alpha when developing and reporting. Res Sci Educ. 2018;48(1):1-24. doi:10.1007/s11165-016-9602-2
31. Mojahed S, Shekari M, Bokaie M, Dehghani A. The effect of training in pregnant women on beliefs and intention to do FGM. J Adv Pharm Educ Res. 2021;11(4):136-142.
32. Tsekhmister VY, Konovalova T, Tsekhmister YB. Distance learning technologies in online and mixed learning in pre-professional education of medical lyceum students. J Adv Pharm Educ Res. 2021;11(4):127-135.
33. Albhair HA, Bugis BA. Impact of break hours on work quality among respiratory care providers in Saudi Arabia's eastern province. J Adv Pharm Educ Res. 2023;13(1):142-152.