

GEN Z AND THE FUTURE OF BANKING: AN ANALYSIS OF DIGITAL BANKING ADOPTION

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Abstract

In the era of digitalization, a digital bank was the development of banking services. Bank innovation led to innovation in providing various alternative services and improved the ease of transactions for digital banking applications. This study aimed to discuss how digital banks used service features using a modified UTAUT2 approach. The data used was that of respondents belonging to generation Z in Indonesia who used digital banking services on mobile devices. Data analysis was done using PLS-SEM. The findings demonstrated that performance expectancy was the highest variable determining behavioral intention and used behavior. Habit and trust on service provider also predicted intention, and facilitating conditions also had a direct effect on usage behavior when adopting digital banking in generation Z. Surprisingly, effort expectancy, social influence, hedonic motivation, price value, and trust in the internet did not have a significant relationship, for which some possible reasons were explained further. In this article, theoretical and practical implications were also discussed.

Keywords: UTAUT2, generation Z, digital bank.

Introduction

Banking technology advancements are becoming quicker, more effective, and more efficient. The digital market in Indonesia is also increasing rapidly, thanks to generation Z users who are comfortable with, if not born in, the internet environment. Generation Z was born between 1995 and 2010 and can be considered the generation born in the age of Internet technology. This generation is well familiar with digitalization and, of course, digital banks. The grounds for the growing number of digital bank customers in Indonesia are fast, safe, comfortable, easy, and efficient transactions.

In the digitization era, a digital bank is a development of banking services. A digital bank is a bank with an Indonesian legal entity that supplies and conducts business through electronic channels without or with a restricted physical location other than the head office. Digital banks can be new or existing banks that have converted to a digital system. The popularity of digital banks is currently on the rise. Many people in Indonesia have also used digital banks.

Developments in information technology, followed by increasingly high levels of bank competition, have encouraged innovation in providing various alternative banking services that are safe, fast, efficient, and global. The concept of digital banking, in which transactions are safe without needing to be physically present at the bank, is one of the technologies currently commonly employed in financial organizations. The

oldest digital bank, the first in Indonesia, is Jenius. Jenius is a digital bank application released by BTPN in 2016. This virtual bank application makes it easier for customers to make banking transactions and payments. Jenius is also the most popular digital bank. In a survey conducted by DailySocial, 64.2 percent of respondents know Jenius as a digital bank (Figure 1). The total number of Jenius users recorded in the first half of 2022 was 3,995,013 customers, growing 19 percent annually (year on year/yoy) from 3,345,061 customers as of June 2021. Other digital banks also known in Indonesia are Digibank, Neobank, LINE Bank, SeaBank, TMRW, and others.

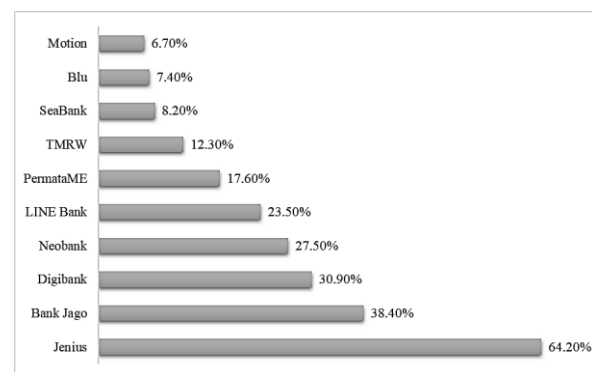


Figure 1. The most-known digital bank in Indonesia

Source: DailySocial, 2023

The advancement of communication technologies also aids in the advancement of digital banking.

Mobile technologies have altered the experience of electronic transactions, resulting in new non-physical payment options for users. This technical advancement also provides marketers with new possibilities to advertise their items. This resulted in the development of e-commerce in an environment where mobile devices were used (Armansyah, 2021). Mobile commerce has snowballed and represents more than a third of global e-commerce transactions.

User perception thus becomes the primary focus of wireless media development firms. Network routing and performance restrictions are other significant obstacles that impede online transactions. Therefore, businesses invest significantly in developing cutting-edge digital bank apps to improve client conveniences, such as incorporating multi-platform mobile payment providers like Gopay, OVO, Dana, Doku, Jenius, LinkAja, and others. Customer privacy and user security are also primary considerations in using digital banks. Several studies have shown that privacy is essential in the current digitalization era, such as Xie, Ye, Huang, and Ye (2021), which shows the strong influence of perceived risk on fintech adoption. If the user has little doubt about privacy and security, he will not continue to make purchases through his smart device and will even uninstall the application from his smart device. Related to security, it also concerns the problem of virus attacks, malicious software, and even permissions in applications that require access to user privacy data, such as telephone and e-mail contacts. Many recent studies have found that risk negatively affects online users' behavioral intentions and behavior. Increased security risk perceptions may decrease users' attitudes toward fintech (Xie *et al.*, 2021).

In addition to security features and user interfaces, localization features are also things that are felt to have benefits for digital application users. Localization enables users to manage their location automatically, eliminating the need to modify the application. The perception of risk among users is inherent in online transactions. Visa's 2022 Consumer Payment Attitudes Study (CPAS) survey in Indonesia found that the use of conventional banks among the public was greater compared to digital banks, namely 51 percent. A number of banking customers have concerns about digital banks. As many as 46 percent said they were afraid of their accounts being hacked, 44 percent were worried about unauthorized transactions or fraud, 34 percent were concerned about the reliability of transactions, and 32 percent were worried about an unstable network (Visa, 2022). In line with that, data from Bank Indonesia (BI), throughout April 2023, the value of digital banking transactions in the country reached IDR 4,264.8 trillion or almost IDR 4.3

quadrillion, covering various digital banking transactions or digital banking according to the classification of the Financial Services Authority (OJK), namely internet banking, SMS / mobile banking, and telephone banking. Meanwhile, in April 2023, the value of digital banking transactions in Indonesia fell 11.8% compared to March 2023 (month-on-month/mom), and was 20.1% lower than April 2022 (year-on-year/yoy). This decline could be caused by the adoption of digital banking in terms of features or data security and user privacy.

Research focusing on digital banking adoption and mobile payment integration has not touched much on understanding application usage. Alnemer (2022), for instance, has not addressed the social influence of the user's environment or their hedonic motivation. Instead, his research focuses on the TAM (Technology Acceptance Model) model to understand the perceived ease of use and perceived usefulness of digital banking adoption. Other research also focuses on digital banking which focuses on the growth of digital banks in recent years (Ligon, Malick, Sheth & Trachtman, 2019; Mhlanga, 2020; Kaur, Ali, Hassan, & Al-Emran, 2021). Recent studies have examined the factors influencing digital banking adoption in various countries (Montazemi & Qahri-Saremi, 2015; Alalwan, Dwivedi, Rana, & Algharabat, 2018; Ligon *et al.*, 2019; Mukhopadhyay, 2021). Digital banking refers to the implementation of various banking services through online platforms, such as bill payments and investments (Leong, Hew, Ooi, & Chong, 2020; Windasari, Kusumawati, Larasati, & Amelia, 2022). In the context of digital banking in Indonesia, little research has been conducted that tries to measure factors in digital bank adoption (Saparudin, Rahayu, Hurriyati, & Sultan, 2020; Windasari *et al.*, 2022; Alfarizi & Sari, 2022; Indriyarti, Christian, Yulita, Aryati, & Arsajah, 2023; Kurniawan, Dumais, & Anwar, 2023). In addition, fewer studies have analyzed the influence of trust in using digital banks and generation Z. Previous research also only focused on examining the correlational relationship between the determinants of digital financial service adoption (Karjaluoto, Shaikh, Saarijärvi, & Saraniemi, 2019; Armansyah, 2021; Kurniawan *et al.*, 2023) have not touched on the privacy and security risks of transactions. To fill this gap, this research investigates the factors that influence the adoption of digital banking applications among generation Z in Indonesia using UTAUT2 (Unified Theory of Acceptance and Use of Technology) related to user trust in privacy risks and transaction security provided by internet providers. Therefore, research on digital banks must provide a thorough understanding of the various factors that influence their use. Considering

this, a comprehensive model that can assess the factors that influence its use and how culture can influence its use is essential because it can provide practitioners with information about understanding the behavior of digital bank users.

Features that attract users to use digital banking applications indicate that features that have clarity, novelty, convenience, control, customization, and can provide customer feedback are features that can attract application usage. At the same time, interactions can increase satisfaction and the customer's desire to reuse the application (Armansyah, 2021).

Santosa, Taufik, Prabowo, and Rahmawati (2021) and Armansyah (2021) found that the UT-AUT2 indicator positively affects user satisfaction. Overall, satisfaction has a positive effect on continuing intentions. Therefore, digital banking companies can expand their target market beyond the millennial generation and pay more attention to the older generations, such as baby boomers and generation X. A similar finding was also found by Pradhina and Indrawati (2019) demonstrates that customers will keep using the Jenius app because it is so user-friendly. UTAUT (Unified Theory of Acceptance and Use of Technology) is a development of the Technology Acceptance Model (TAM) model by Davis (1989), namely Performance Expectance (PE) adoption of the perceived usefulness variable (Perceived Usefulness) and Effort Expectance (EE) from the perceived ease of use variable (Perceived Ease of Use) which was further developed by Venkatesh, Morris, Davis, and Davis (2003) by adding social influence and facilitating conditions variables to gain an understanding of behavioral intentions.

Furthermore, the UTAUT2 model was developed by analyzing variables that are considered to represent the desire factors for technology consumption from the user's side in the form of hedonic motivation, price value, and habit (Venkatesh, Thong, & Xu, 2012). In this research we use the UTAUT2 model by modifying the model from Armansyah (2021) to obtain the impact of user trust in the internet regarding privacy and trust in network service providers, especially Gen Z users.

Generation Z is a generation that has its own uniqueness. Most of this generation was born during the change towards digitalization, and some were born when technology began to develop rapidly, so this generation has a tech-savvy character. When they use technology, they like to upload whatever activities they do on social media as if they have no privacy or data concerns. This is what makes it interesting to understand more about the character of generation Z in technology and try to answer whether they have

concerns about privacy and data security in the context of digital banking, so it is new with the modified UT-AUT2.

This study has three novel contributions to research on technology acceptability to enhance bank technology marketing. First, we investigated the acceptance and use of digital banks using UTAUT2. Second, to get an understanding of how the privacy and security risks of transactions from generation Z viewpoint, we propose basic UTAUT2 with modifications of (a) privacy risk based on internet trust and (b) transaction security based on service provider trust. Third, we examine digital banking on digital banks based on modified UTAUT2 in Indonesia to investigate how the characteristics of the generation, particularly generation Z, can provide a new viewpoint.

Based on current descriptions, this work builds intentional behavior and behavior utilizing digital banks using the modified UTAUT2.

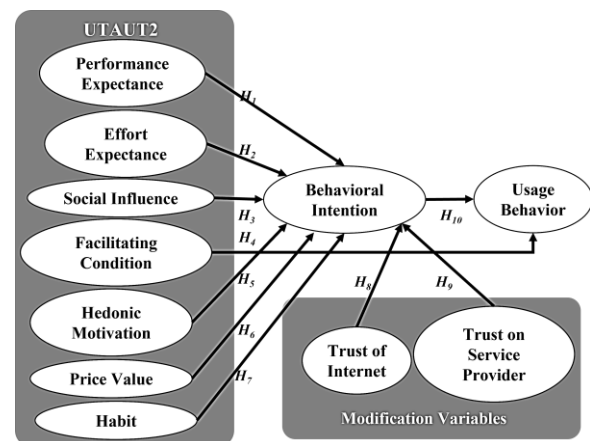


Figure 2. Research framework

Privacy is an important thing nowadays, especially digital banking amidst the many cases of data leaks that end up being traded, so it is our concern how generation Z responds to these privacy risks and also their views on transaction security provided by network service providers. These two things are one of the bases for us to include the trust of the internet and trust on service provider variables as part of the UTAUT2 modification in addition to the characteristics of generation Z who were born or know the internet well so whether they pay attention to transaction security and privacy security in the context of digital banking. These two variables were added to the UTAUT2 model shown in Figure 2. UTAUT2 is modeled by evaluating new factors that indicate the user's desire for technology consumption. The level of technology used by users is represented by usage behavior. Behavioral intention represents the user's intention to engage in the adoption of digital banks.

Performance Expectancy

Performance expectation is the extent to which an individual believes using the system will help him achieve increased job performance. Individuals who believe the system will help them do their job better will perform better (Oye, Iahad, & Ab. Rahim, 2014). Armansyah (2021) demonstrated that performance expectations impact behavioral intention in mobile payment usage. This variable also represents efficiency, efficacy, saving time or money, seeking benefits, and so on. Yadav, Joshi, and Rahman (2015) emphasized that mobile applications add value to users' lives through efficiency and effectiveness, saving them time and money. Kurniawan *et al.* (2023) assume that performance expectancy can influence the attitudes and intentions of digital banking users, in line with Patil, Tamilmani, Rana, and Raghavan's (2020) thinking, which shows a significant relationship between performance expectancy and behavioral intention in mobile payments adoption in India. Based on the above, we believe that consumers want digital banks to add value to their lives while operating more efficiently and effectively; this leads to the premise:

H₁: Performance expectancy positively influences behavioral intention.

Effort Expectancy

Effort Expectancy is defined as the comfort users feel in using the system. Business expectations regarding (the perceived ease of use) of TAM and how to relieve an individual by using the system (Oye *et al.*, 2014). According to Kurniawan *et al.* (2023) effort expectancy is the degree to which a technology may be used with ease to accomplish tasks with less effort, time, and energy. The concept of this construct was first formulated in the UTAUT model, which was derived from the findings of previous technology acceptance models. Effort expectation is a psychological notion that describes a person's perspective on how simple or difficult it is to utilize a system or embrace technology (Armansyah, 2021). In the context of digital banking adoption by digital banks, effort expectation refers to the extent to which consumers believe that utilizing a digital bank will take effort. A user's experience with similar technologies, degree of technical expertise, complexity of the user interface, and availability of essential assistance and resources can all impact their impression of effort expectations. The higher the effort expectation, the lower the user's impression of the technology's difficulty level.

Considering effort expectations when designing a system or technology is critical since the user's perception

of the degree of work required might influence user adoption and acceptance of the technology. Users may hesitate or have trouble using technology if they believe it is too challenging or complicated. Therefore, technology designers and developers should strive to create user interfaces that are intuitive, easy to understand, and minimize the effort required to interact with the system. By paying attention to the effort expectancy factor, users will be more inclined to accept and adopt new technologies more quickly and effectively. In line with Patil *et al.* (2020) who shows that effort expectancy has a significant effect on mobile payment adoption in India.

Armansyah (2021) indicated that small business expectations directly impacted behavioral intentions to use mobile payments. Previous research supports the notion that, in this paradigm, effort expectations have a significant impact on behavioral intention. It is reasonable to conclude that if consumers find technology simple to use, they will be more likely to use it. Some features that attract users include convenience, customization, and control (Kim, Wang, & Malthouse, 2015), so it is logical that users put in a small effort to learn because mobile applications are easy to use, facilitate customer needs, and allow more significant users to control technology. Customers want to minimize the time they spend learning to take advantage of it, put less effort into learning how to use a digital bank, and use it if it is effortless.

H₂: Effort expectancy negatively influences behavioral intention.

Social Influence

Next to be examined is social influence. The process through which people or groups affect other people's attitudes, actions, and decisions is known as social influence. This entails using social influence to persuade people to act or believe in a particular manner that a person or organization desires. Family, friends, the community, the media, and society may all be sources of social influence. Numerous facets of life, such as consumer preferences, political opinions, and purchase decisions, are significantly influenced by social influence. Understanding this concept can help us understand how and why people influence others.

According to the models, social influence is the level of influence an individual has on others' beliefs about adopting technology. On adopting e-money in Indonesia, Khatimah, Susanto, and Abdullah (2019) showed the vital role of social influence on behavioral intentions in payment habits. In adopting the use of a mobile wallet (Pillai & Shanmugam, 2021), people will be interested in using a mobile wallet if it is

promoted by someone close to them who is prominent. In line with that, Windasari *et al.* (2022) also found a relationship between social influence on the behavioral intention of the digital-only banking user experience in Indonesian generations Y and Z also supported by Kurniawan *et al.* (2023) who showed a significant relationship between social influence and behavior intentions to use digital banking in generation Z. Based on the results of the UTAUT2 model and other research in this field, social impact will positively affect behavioral intention to utilize digital bank applications. This impact will be in everyday interactions among family members, friends, or coworkers who may use digital banking applications, affecting users' intentions to use those digital banking services.

H₃: Social influence has a positive impact on behavioral intention.

Facilitating Condition

The level of a person's belief in the system's organizational and technological infrastructure is known as the facilitating condition. The degree to which individuals perceive technological infrastructure to facilitate system use is called facilitating conditions (Kurniawan *et al.*, 2023). In social theory, "facilitating conditions" refers to elements that raise a person's chance of adopting or engaging in a specific action. This idea focuses on elements that help or hinder someone from acting. Understanding conditional facilitation is crucial for behavior change theory because it may be used to create more successful treatments for promoting the targeted behavior change. This notion incorporates variables derived from prior research models on models of technology acceptance and use.

Kantika, Kurniasari, and Mulyono (2022) researched facilitating condition acceptance and discovered that perceived enjoyment of services positively and significantly influences digital bank service adoption in Indonesia. Saudjhana and Herman (2023) also found that facilitating conditions significantly influence behavioral intention. When apps become more dynamic, the environment in which they operate can also become a factor in determining whether or not to adopt them (Armansyah, 2021). Finally, specific mobile applications strongly rely on the Internet, but others may work correctly without it. The degree to which mobile apps rely on the internet can be another facilitating condition influencing usage behavior to adopt an application. Research by Patil *et al.* (2020) found that facilitating conditions influence the behavior of using mobile payments in India. The following hypothesis is proposed:

H₄: The facilitating condition influences usage behavior positively.

Hedonic Motivation

This study also observed another component to be crucial in the adoption of digital banking, hedonic motivation. Hedonic motivation in the UTAUT2 model is the joy or pleasure of using technology. "Hedonic motivation" in the context of digital banking adoption refers to the encouragement or motivation of individuals to adopt or use digital banking services for the personal satisfaction or pleasure they derive from using them (Armansyah, 2021). It focuses on the emotional and subjective aspects of the experience of using digital banking technology. Hedonic motivation is essential in digital banking adoption because individuals tend to be more motivated to use digital banking technology if they feel satisfied and enjoy the experience. Therefore, digital banking service providers often try to improve the hedonic aspects of their services to attract interest and increase user adoption.

Evidence from a previous study shows that hedonic motivation can influence consumers' behavioral intentions to use technology. Bastari, Eliyana, Syabarrudin, Arief, and Emur (2020) show that hedonic motivation is related to comes from multi-sensory, fantasy, and affective aspects of consumers. Morosan and DeFranco (2016), claims that the existence of games or gamification can considerably boost the adoption process of mobile applications. Research on the habit of using e-money payments in Indonesia shows a consistent and significant result between hedonic motivation and behavioral intention in the payment habits of e-money users (Khatimah *et al.*, 2019) in mobile learning (Al-Azawei & Alowayr, 2020) and use of an e-wallet (Seng & Hee, 2021). Referring to the existing arguments, the following hypothesis is proposed:

H₅: Hedonic motivation positively influences behavioral intentions.

Price Value

The price value is the amount of money users are willing to pay to use or benefit from adopting technology. A theoretical study confirms the relevance of pricing value to user behavioral intentions in technology adoption.

Armansyah (2021) shows a correlation between price value and behavioral intentions, which means that mobile payment users could accept the costs incurred to use mobile payment apps. While research on online banking services also shows a significant

positive relationship between price value and behavioral intention, users tend to be willing to pay more for the banking services they want online (Hutamargo, Andajani, & Trisnawati, 2021). Inconsistencies in theoretical findings may be related to certain types of technology and the price people pay for these technologies, as in research from Wong, Leong, and Puah (2019), which shows that price value has no impact on adopting mobile internet in Malaysia.

The market is flooded with free digital apps, and customers are wary of upgrading apps used for free to apps that involve payment. This suggests that users are skeptical of the app's usability potential and the exchange between the prospective benefit and the cost for users when choosing whether to use an app. These provide reasons to assume that price value will play a substantial role in adopting digital banking services, supporting the hypothesis that

H₆: Price value positively influences behavioral intention.

Habit

Habit is behavior after using and understanding the use of technology. Validated in Nguyen, Nguyen, Mai, and Tran (2020) study on the adoption of digital banking services in Vietnam, which found that habits affect how sustainably people utilize systems and that everyday use of new technologies increases habits, which in turn encourages people to adopt new technologies. Saudjhana and Herman (2023) also confirm that habit is the main factor influencing behavioral intention to use digital banking. Rahmiati and Susanto (2022) identified habit as a critical variable of intention to use e-money. Based on these findings, we claim in this study that habits will significantly influence behavioral intention to adopt digital bank apps in the adoption scenario. The following could be the strategy for such influence: Because digital bank applications are frequently created for daily use, users must test the application for a predetermined amount of time to see what advantages it brings to developing a habit of using a particular application. Once a habit is established, changing to a different program becomes more challenging, and the user is less inclined to consider using a different program. This behavior will boost people's desire to use digital banks; hence, we suggested the notion that

H₇: Habit has a positive effect on behavioral intention.

Trust of Internet

Trust is a personal belief that a party will complete its responsibilities (Kurniawan *et al.*, 2023). Trust

in the internet is the extent to which users trust it, especially when customers fill in sensitive personal information via the internet (Armansyah, 2021). Perceptions of security are essential in adopting digital bank services and have a significant positive impact on digital bank services in Indonesia (Kantika *et al.*, 2022). The more trust they have in the internet when using digital banks, the more likely they are to continue using them. As a result, the following hypothesis is advanced:

H₈: Internet trust impacts positively on behavioral intentions.

Trust on Service Provider

The level of trust is determined by the degree to which individuals communicate through a channel (Armansyah, 2021). Because this channel is critical to the information exchange process, it must provide high data confidentiality and privacy, and user trust in the channel is required for application use. The greater the provider channel's degree of security, the more likely the users will be to utilize the apps and the more likely they will continue to use the digital bank. Nguyen *et al.* (2020) found that trust significantly influences digital banking behavioral intention in Vietnam. The following hypothesis is suggested on this premise:

H₉: Trust on service provider positively influences behavioral intention.

Behavioral Intention and Usage Behavior

Behavioral intention is a desire to use a product's or service's technology effectively. Parkins, Rollins, Anders, and Comeau (2018) stated as the consumer's willingness and effort to use technology effectively. The behavioral intention for using digital banking at digital banks refers to an individual's intention or desire to use the digital banking services provided by digital banks. It reflects an individual's tendency to adopt and use digital banking technology to conduct financial transactions, manage accounts, or use other banking services.

Usage Behavior is a goal variable to be achieved in using technology that shows the level of technology use in various aspects experienced by users (Armansyah, 2021). Usage behavior is users' behavior or habits when using products, services, or platforms. Usage behavior is an ongoing commitment to a product (Ali, Raza, Hakim, Puah, & Chaw, 2022). This pattern includes how users interact with, utilize, and use the product or service. Usage patterns reflect a user's preferences, needs, and habits when using the product or service. Usage behavior within digital banking

refers to how customers use digital banking services, such as accessing accounts, making transactions, viewing transaction history, setting reminders, and contacting customer service (Kaur & Arora, 2023). Understanding usage behavior within digital banks can help them optimize the user experience, discover customer trends and preferences, and develop better bar features and services. Better business analysis, decision-making, and marketing strategy development can also be based on data about usage behavior. According to specific findings in consumer behavior studies, intention is a good predictor of subsequent behavior (Makanyeza, 2017; Sobti, 2019; Armansyah, 2021).

In designing and promoting digital banking services, service providers must consider the determinants and ensure a positive user experience to drive broader adoption and use. The higher the user's intention or desire, the higher the level of achievement of the user's use of technology, in line with this, Kaur and Arora (2023) research shows that behavioral intentions have a positive effect on usage behavior; hence, the following hypothesis is proposed:

H₁₀: Behavioral intention has a positive effect on usage behavior.

Testing the effect of all exogenous variables on endogenous variables (behavioral intention and usage behavior) was also conducted to determine the inter-relationship of all variables.

Research Methods

This study uses questionnaire-based data from respondents belonging to generation Z with a minimum age of 18 years to 27 years who are digital bank users and utilize digital banking from digital banks for private transactions. Purposive sampling was used, and 326 respondent data points were obtained. Table 3 shows the results of the respondent's description. A 5-point Likert scale was used to measure the indicators of the model. Indicators of each construct can be seen in Table 1. No encouragement or special compensation was applied to encourage voluntary and anonymous survey participation. A preliminary study was conducted in February 2023 to discover the questionnaire's inadequacies. The questionnaire was delivered to 40 respondents once its items were validated. The item has received some phrase changes. The non-probabilistic sampling approach is used in empirical research. The survey was administered online via social media applications such as X (formerly Twitter) and Instagram. This work analyzed data using descriptive and statistical methods in PLS-SEM using

Table 1
Model Indicators

Construct	Indicator	Item	Reference
Performance Expectance	Benefit	PE 1	Venkatesh <i>et al.</i> (2012)
		PE 2	
	Reliability	PE 3	
		PE 4	
Effort Expectance	Efficient	PE 5	Venkatesh <i>et al.</i> (2012)
		Ease to use	
	Ease to learn	EE 2	
		EE 3	
Social Influence	Quick to learn	EE 4	Venkatesh <i>et al.</i> (2012)
		Advice for using technology	
	Suggestions for using technology from closest person	SI 2	
		SI 3	
Facilitating Condition	Have resources	FC 1	Venkatesh <i>et al.</i> (2012)
		Ability to use technology	
	Application Support	FC 3	
		FC 4	
Hedonic Motivation	Enjoy using technology	HM 1	Venkatesh <i>et al.</i> (2012)
		HM 2	
	Interest in using technology	HM 3	
Price Value	Cost of using technology	PV 1	Venkatesh <i>et al.</i> (2012)
		PV 2	
	Affordability of technology costs	PV 3	
Habit	Habits of using technology	HB 1	Venkatesh <i>et al.</i> (2012)
		HB 2	
	Dependence on technology	HB 3	
		HB 4	
Trust of Internet	Trust in internet media	TOI 1	Armansyah (2021)
		TOI 2	
	Internet access security	TOI 3	
		TOI 4	
Trust on Service Provider	Trust the technology provider	TSP 1	Armansyah (2021)
		TSP 2	
	Trust in data security	TSP 3	
		TSP 4	
Behavioral Intention	Intention to use technology	BI 1	Venkatesh <i>et al.</i> (2012)
		BI 2	
Usage Behavior	Continue to use technology	UB 1	Armansyah (2021)
		UB 2	
	Recommend technology	UB 3	
		UB 4	

the measurement model evaluation (outer) and structural model evaluation (inner). PLS-SEM is designed for solving multiple regression problems. Its technical purpose is to develop a model that converts a group of connected explanatory factors into a new set of variables that are not related to each other. Another

thing that is a consideration for using this method is that, because of its advantages in dealing with data complexity, PLS-SEM tends to be more flexible, can handle complex data, and is more suitable for analysis that focuses on prediction, where the main goal is to understand the causal relationship between variables. This makes it possible to test and build simpler and easier-to-understand models.

The inner model explains the link between latent variables. An association between latent variables is deemed significant in hypothesis testing if the *p-value* is lower than 0.05. Table 2 systematically analyzes this study for testing data and hypotheses.

Table 2
Steps of Analysis

Steps	Analysis Indicator	Rule of Thumb
Measurement model evaluation (outer model)	Indicator reliability:	>0.40
	Loading factor	
	Internal consistency reliability:	>0.70
	Composite reliability and Cronbach's Alpha	
	Convergent validity:	>0.50
Structural model evaluation (inner model)	Average Variance Extracted (AVE)	
	Discriminant validity:	Square root of AVE > correlation between constructs
	Square root of AVE and correlation between constructs	
	Variance Inflation Factor (VIF)	<5
	<i>p-value</i>	<0.05
	<i>R</i> ² value	<i>R</i> ² > 0.67 → Strong 0.33 < <i>R</i> ² ≤ 0.67 → Moderate 0.19 < <i>R</i> ² ≤ 0.33 → Weak <i>R</i> ² is ≤ 0.19 → Very Weak

Source: Chinn, 1998; Latan and Ghozali, 2014; Hair Jr., Matthews, Matthews, and Sarstedt, 2017

Results and Discussion

This study employs a quantitative approach to data processing and testing to draw conclusions and address the concerns highlighted by the adoption of digital banks by generation Z. This study provides primary data from generation Z consumers of digital banking services aged 18 to 27. Data was collected using an online survey, and 326 ready-to-process data points were obtained. The respondents are described in Table 3.

As seen in Table 3, most respondents were female, with 175 people (53.68%) ranging in age from

24 to 27 years (38.65%) and residing in Surabaya (28.53%). Most of those who responded to the questionnaire were self-employed, with as many as 130 people, or approximately 39.88% of the total respondents, earning between IDR 5,000,000 to IDR 6,999,999 (27.91%).

Table 3
Respondent Data

Demographic	Category	Frequency	Percentage
Gender	Male	151	46.32%
	Female	175	53.68%
Age	18 to 20 years	90	27.61%
	21 to 23 years	110	33.74%
	24 to 27 years	126	38.65%
Occupation	Self-employed	130	39.88%
	Student	70	21.47%
	Private employees	85	26.07%
	Government employees	35	10.74%
Monthly Income in Indonesia Rupiah	Others	6	1.84%
	Less than 1,000,000	59	18.10%
	1,000,000 to 2,999,999	55	16.87%
	3,000,000 to 4,999,999	78	23.93%
	5,000,000 to 6,999,999	91	27.91%
Domicile	More than 7,000,000	43	13.19%
	Surabaya	93	28.53%
	Sidoarjo	36	11.04%
	Gresik	33	10.12%
	Semarang	25	7.67%
	Jakarta	26	7.98%
	Bandung	19	5.83%
	Lampung	17	5.21%
	Balikpapan	25	7.67%
	Makassar	23	7.06%
Samarinda	20	6.13%	
Others	9	2.76%	

Statistical Results

The PLS-SEM approach was used to process the data. This approach is thought to be capable of overcoming numerous regression issues to construct a model that turns a collection of correlating explanatory factors into a new set of uncorrelated variables. The obtained measurement model (outer model) is then evaluated based on the substantive content model by comparing the weight's relative size and the weight's significance of the weight, and the inner model is evaluated by looking at the variance percentage, *R*² value, and structural path coefficient.

Outer Model

The partial least squares regression generated the following results (Figure 3).

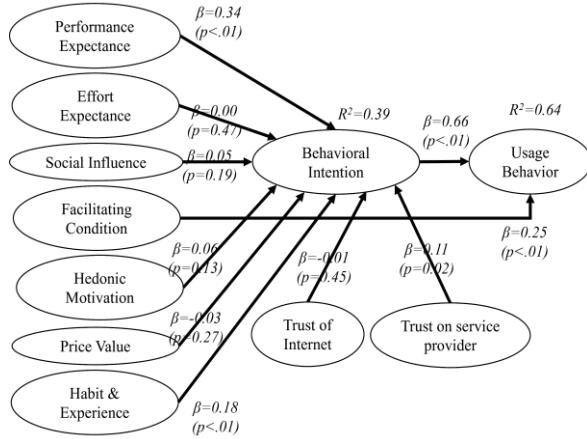


Figure 3. PLS-SEM model

As seen in Tables 4 and 5, the loading factor values for the indicators are more significant than 0.7. While the AVE value is greater than 0.6, in this condition, according to Chinn (1998), an indicator is said to be reliable if its value is more than 0.7, and a loading factor of 0.5 to 0.6 can still be kept for models under development, showing the fulfillment of the validity criterion. The discriminant validity results in Table 6 also show that the square root of AVE value for each variable is greater than the correlation value between constructs. This shows that discriminant validity has been met. The composite reliability and Cronbach α values are also shown in Table 4, which have values larger than 0.7, suggesting that the reliability conditions were fulfilled. It can be concluded that all indicators can measure all variables with a loading factor value greater than 0.7.

Inner Model

The inner model analyzes and evaluates the relationship between latent variables. The whole collinearity VIF, p -value, R^2 , and path coefficients are assessed at this stage to identify the effect of each variable, either directly or indirectly. According to Table 5, the adjusted R^2 values for behavioral intention (BI) are 0.384, and usage behavior (UB) is 0.641 with R^2 values of 0.399 and 0.643 with p -value of 0.001, respectively. These values are between 0.33 and 0.67, indicating that the variable has a modest impact. From the VIF value, this model also does not exhibit multicollinearity because all values are less than 5.

**Table 4
Indicator Loading**

Item	Factor Loading	p -value	Cronbach's Alpha	Composite Reliability
PE1	0.785	<0.001	0.866	0.903
PE2	0.769	<0.001		
PE3	0.829	<0.001		
PE4	0.836	<0.001		
PE5	0.814	<0.001		
EE1	0.814	<0.001	0.849	0.899
EE2	0.890	<0.001		
EE3	0.856	<0.001		
EE4	0.759	<0.001		
SI1	0.694	<0.001	0.768	0.868
SI2	0.899	<0.001		
SI3	0.882	<0.001		
FC1	0.749	<0.001	0.795	0.815
FC2	0.855	<0.001		
FC3	0.606	<0.001		
FC4	0.673	<0.001		
HM1	0.881	<0.001	0.848	0.908
HM2	0.854	<0.001		
HM3	0.891	<0.001		
PV1	0.871	<0.001	0.839	0.903
PV2	0.884	<0.001		
PV3	0.853	<0.001		
HB1	0.814	<0.001	0.817	0.880
HB2	0.750	<0.001		
HB3	0.758	<0.001		
HB4	0.891	<0.001		
TI1	0.867	<0.001	0.858	0.904
TI2	0.747	<0.001		
TI3	0.872	<0.001		
TI4	0.862	<0.001		
TSP1	0.814	<0.001	0.836	0.891
TSP2	0.835	<0.001		
TSP3	0.866	<0.001		
TSP4	0.760	<0.001		
BI1	0.941	<0.001	0.870	0.939
BI2	0.941	<0.001		
UB1	0.875	<0.001	0.907	0.936
UB2	0.948	<0.001		
UB3	0.933	<0.001		
UB4	0.778	<0.001		

**Table 5
Outer Model**

	AVE	VIF	R^2	Adjusted R^2	p -value
PE	0.651	2.718			
EE	0.691	2.365			
SI	0.689	1.372			
FC	0.628	2.934			
HM	0.767	2.098			
PV	0.756	1.724			
HB	0.648	2.448			
TOI	0.704	1.721			
TSP	0.672	2.066			
BI	0.885	2.530	0.399	0.384	<0.001
UB	0.785	3.483	0.643	0.641	<0.001

Table 6
Square Root of AVE

	PE	EE	SI	FC	HM	PV	HB	TI	TIM	BI	UB
PE	0.807	0.628	0.188	0.644	0.610	0.420	0.629	0.340	0.495	0.588	0.650
EE	0.628	0.831	0.100	0.666	0.564	0.481	0.462	0.226	0.529	0.469	0.496
SI	0.188	0.100	0.830	0.334	0.125	0.208	0.360	0.424	0.292	0.234	0.298
FC	0.644	0.666	0.334	0.727	0.572	0.575	0.590	0.432	0.594	0.484	0.512
HM	0.610	0.564	0.125	0.572	0.876	0.518	0.502	0.189	0.404	0.473	0.549
PV	0.420	0.481	0.208	0.575	0.518	0.870	0.407	0.362	0.441	0.303	0.367
HB	0.629	0.462	0.360	0.590	0.502	0.407	0.805	0.398	0.515	0.517	0.684
TI	0.340	0.226	0.424	0.432	0.189	0.362	0.398	0.839	0.531	0.269	0.355
TSP	0.495	0.529	0.292	0.594	0.404	0.441	0.515	0.531	0.820	0.457	0.458
BI	0.588	0.469	0.234	0.484	0.473	0.303	0.517	0.269	0.457	0.941	0.754
UB	0.650	0.496	0.298	0.512	0.549	0.367	0.684	0.355	0.458	0.754	0.886

The predictive power of the structural models shows that five of the ten proposed hypotheses were supported (H_1 , H_4 , H_7 , H_9 , and H_{10}). The results indicate that the intention to use digital banking is mainly explained by performance expectancy, with values of 0.336. Furthermore, the intention to use is also explained by habit (0.198) and trust on service provider (0.107), and facilitating conditions specifically explain usage behavior on the digital bank of generation Z. The rest of the constructs, that are "effort expectancy, social influence, hedonic motivation, trust in the internet, and price value," have no significant relationship.

Table 7
Hypothesis Test

Path	Coefficients	p-value	Hypotheses
PE → BI	0.336	0.001	Significant
EE → BI	0.005	0.467	Not Significant
SI → BI	0.049	0.189	Not Significant
FC → UB	0.253	0.001	Significant
HM → BI	0.061	0.134	Not Significant
PV → BI	-0.034	0.270	Not Significant
HB → BI	0.184	0.001	Significant
TI → BI	-0.007	0.449	Not Significant
TSP → BI	0.107	0.025	Significant
BI → UB	0.660	0.001	Significant

Discussion

The study found that performance expectancy is the highest variable that determines the intention of generation Z to use a digital bank, implying that positive relationship between performance expectancy and behavioral intention. Thus, digital bank users' performance expectations can boost their behavioral intention to utilize digital bank applications. This demonstrates that generation Z can benefit from digital bank services in productivity, convenience, boosting user ability, and assisting in completing critical tasks faster and more efficiently, which motivates users to

complete essential tasks. Performance expectancy was found to influence behavioral intention. These findings corroborate the findings of a previous study by Pratama and Renny (2022) on mobile banking apps and Sair and Danish (2018) on mobile commerce that performance expectations are shown to be a determinant of behavioral intention and also support outcomes by Armansyah (2021) in mobile payment app and Saparudin *et al.* (2020) in mobile banking app. This conclusion is feasible because generation Z customers expect to use digital banks, and digital banks' application services meet these expectations.

Another variable with a significant relationship is facilitating conditions, implying a solid relationship between facilitating conditions and the use of digital banks and that an increase in facilitating conditions will affect the usage behavior of generation Z digital bank users. This demonstrates that generation Z is defined as a generation that quickly accepts digital technology, and they believe that gadgets that meet some requirements and an internet connection could support the use of digital banks, coupled with the availability of knowledge and support for digital bank support systems in their use. These findings corroborate Wong *et al.* (2019); Nguyen *et al.* (2020); Pratama and Renny (2022); Saudjhana and Herman (2023), which shows that facilitating conditions affect behavioral intention in using technology but differs from research conducted by Anggraeni, Hapsari, and Muslim (2021) and Armansyah (2021).

The effect of habit was significant on behavioral intention, indicating that increasing habit will influence behavioral intent to use digital banks. As shown in Table 5, generation Z digital bank users feel the necessity to use applications, so they are accustomed to using digital banks. This is possible because digital banks make it simple to conduct payment transactions, and existing digital banks have provided many other features to facilitate user payment transactions. These findings are consistent with the study findings by

Nguyen *et al.* (2020), Pratama and Renny (2022), Rahmiati and Susanto (2022), and Saudjhana and Herman (2023) and does not support the result by Armansyah (2021).

The effect of trust in service providers on behavioral intention was significant, implying that increased trust in service providers, increases the influence on behavioral intention to use digital banks. These findings corroborate Kantika *et al.* (2022), and Saparudin *et al.* (2020) that trust on service provider influence generation Z's behavioral intention to use digital banks. Even though it has a positive influence, it does not mean that generation Z has high trust in service providers that they will definitely use digital banks more. However, this influence reflects that the basis for generation Z using digital banks is one of the data securities in banking transactions provided by service providers. Choosing to use or not use digital banks is each individual's preference. However, when there is trust in the service provider regarding data security, then access to the digital bank will feel safer. When generation Z has trust in service providers, they intend to behave in using digital banks. This also indicates that generation Z is concerned about data security and data privacy on the network, especially when accessing digital banks.

The effect of behavioral intention on usage behavior was also related. As a result, the rise in behavioral intention influences generation Z's use of digital banks. These findings support Anggraeni *et al.* (2021) and Armansyah (2021) that behavioral intention influences usage behavior in adopting digital banks. This is because generation Z believes that the purpose of using digital banks has been adequately accommodated and wishes to continue using digital banks in payment activities and other banking services.

Effort expectancy refers to the extent to which consumers believe that using a digital bank will take effort. The results show that the influence of effort expectancy does not have a significant impact on behavioral intentions, which means that previous user experience with similar technology, level of technical expertise, user interface complexity, and availability of help and resources from digital banks do not further influence effort expectations in generation Z. Generation Z shows their uniqueness as tech-savvy; this generation was born into the digital world, so they are already familiar with digital application user interfaces and according to the uniqueness that generation Z has, whether it is difficult or easy to use a digital bank, this generation will easily adapt, including digital banks, these results are in line with Anggraeni *et al.* (2021), Armansyah (2021), and Saudjhana and Herman (2023) that effort expectancy will be insignificant for behavioral intention. The findings of this study differ

from earlier by Sair and Danish (2018), which show effort expectancy affecting the use of Internet banking and Saparudin *et al.* (2020) and Pratama and Renny (2022) in the adoption of mobile banking, this is possible in Saparudin *et al.* (2020) due to the difference in the background of the founding banks between mobile banking and digital banks where mobile banking is a mobile service from a bank that has been established before, while digital banks are indeed the establishment of a digital bank from the start.

Another variable that does not relate to behavioral intention is social influence. This is in line with Armansyah (2021) and Pratama and Renny (2022) and contradicts the findings of Khatimah *et al.* (2019) on e-money and Pillai and Shanmugam (2021) on adopting a mobile wallet. This is conceivable because consumers are not persuaded by others encouraging them to use or embrace digital banks. Generation Z believes that using the program is vital since, in addition to convenience, it has become a new habit following the COVID-19 pandemic.

The effect of hedonic motivation also was found to be insignificant on the intention to use a digital bank, implying that an increase in hedonic motivation does not affect generation Z's behavioral intention to use digital banks. These findings corroborate Pratama and Renny (2022) and Armansyah (2021) and differ from the results by Rahmiati and Susanto (2022) and Khatimah *et al.* (2019) in e-money adoption. This disparity in results is possible because generation Z respondents believe using digital banks is a necessity, not a matter of fun or lifestyle. The period after the COVID-19 pandemic became a period when electronic or digital transactions became mandatory due to restrictions on social interaction, so the use of digital bank payments or applications became commonplace.

The effect of price value on behavioral intention also found no relation. This study's findings, in line with Raihan and Rachmawati (2019) on the adoption of e-wallets in Indonesia, differ from previous ones by Armansyah (2021) and Pratama and Renny (2022), which demonstrates the negative effect of intention to use mobile payments and Wong *et al.* (2019), on mobile internet users in Malaysia. This shows that the high or low costs that must be incurred to use a digital bank in the sense of costs for internet access have no effect on the behavioral intentions of generation Z in Indonesia. This can be caused by the internet having become a part of generation Z's life, so they feel it is important to always be connected to the internet so that prices have no impact, especially on access to digital banks.

Internet trust was also found to be insignificant for behavioral intentions. This means that there is no significant influence of internet trust on behavioral

intentions. An increase or decrease in internet trust does not affect generation Z's behavioral intentions for using digital banks. Internet trust may not directly influence generation Z's behavioral intentions to use digital banking because other factors may play a more significant role in shaping their intentions. Such as experience and knowledge factors: Generation Z may have grown up with digital technology and extensive internet use. Therefore, they may have a high level of knowledge and experience in using the internet and digital technology in general. In this case, an increase or decrease in internet trust will not have a significant impact on their intentions because they already have a strong understanding of the usefulness and benefits of using digital banks. Another thing is the profit and convenience factor. Generation Z's intention to use a digital bank may be more influenced by factors such as ease of use, transaction speed, accessibility, and financial benefits provided by digital banking services. Although internet trust is important in determining security and privacy in digital bank use, these factors may be more dominant in shaping their intentions. These results confirm Raihan and Rachmawati (2019) and Armansyah (2021) differ from Sapa-rudin *et al.* (2020).

The test on the effect of all exogenous variables on endogenous variables was also found to be related (Figure 1). Facilitating conditions and behavioral intentions influence generation Z's usage behavior when adopting digital banks.

Conclusion and Implications

Based on the research findings, it can be concluded: first, that the acceptance and use of digital banks using the UTAUT2 approach shows that the variables of performance expectations, trust in service providers, and habits have a significant influence on the behavioral intentions of generation Z digital bank users in Indonesia. Then the behavioral intention relationship is proven to influence usage behavior significantly, this means that when generation Z has a pleasant and satisfying experience with a product or service, it is likely that they will have a higher intention to continue using it in the future. Then, facilitating conditions were shown to influence usage behavior. Generation Z users in Indonesia feel that there are facilitating conditions that make it easier to use digital banks, such as the availability of digital bank applications that are compatible with their devices, the availability of a reliable internet network, and the accessibility of digital banking services in general can be facilitating conditions that influence the use of digital banks. Apart from the intuitive user interface, easy navigation and user-friendly features, this facilitating condition can encourage generation Z to actively use

digital banking. The easier it is to use digital banking, the more likely they will feel comfortable and encouraged to use it. The theoretical contribution of the research is that trust in service providers is considered an important factor influencing generation Z's behavioral intentions in using digital banks. High trust will lead to more positive perceptions of services, increase user satisfaction, influence technology acceptance, build strong relationships, and strengthen individual beliefs in the benefits of using digital banks. When users have high trust in a service provider, they tend to be satisfied with their usage experience. High trust in this case can increase positive behavioral intentions, such as the intention to continue using the service or recommend it to others. The level of trust in service providers is very important for generation Z when exchanging information, and the level of data security and privacy is required to adopt digital bank services, thus expanding the theory of technology user behavior in digital bank adoption. Second, generation Z, which is a generation that grew up with digital technology, generally has diverse views regarding the privacy and security risks of digital bank transactions. Generation Z tends to have a high awareness of privacy and security risks in digital bank transactions. Generation Z generally cares a lot about the privacy and security of their personal data. They want to ensure that personal information, such as account details, transaction history, and identity information, does not fall into the wrong hands. They are frequently exposed to news about data breaches, cyberattacks, and online fraud. As a result, they tend to be more aware of the potential risks associated with using digital banks. Despite concerns about security risks, generation Z also has high trust in existing security technologies. They tend to trust data encryption, two-factor authentication, and other security technologies as ways to protect their transactions and information. However, they remain careful and pay attention to the security measures implemented by digital banks. While generation Z may be aware of privacy and security risks, they also realize that no system is perfect. They may feel that there is no complete guarantee against the risks associated with digital banking. Third, generation Z has several key characteristics in responding to digital bank adoption. Generation Z grew up with digital technology and has a deep understanding of the use of technology. They are familiar with digital devices and applications, and tend to more easily adopt technological innovations, including digital banking. Generation Z has a high level of technology skills, making it faster to learn and use applications and services. Generation Z really values accessibility and ease of use of services. They are looking for banking solutions that can be accessed via mobile devices, with interfaces that are intuitive

and easy to use. Generation Z wants to be able to carry out banking transactions quickly, efficiently and without obstacles. Although generation Z are savvy technology users, they also have high concerns about security and privacy. They are aware of the risks associated with using digital banks and want to ensure that their personal data and information is well protected.

The implications of this research can help in identifying the factors that influence generation Z's trust in digital banks, as well as their concerns regarding security and privacy. The implications of this research can be used to improve security and privacy measures, provide transparent information, and build generation Z's confidence in using digital banks. In addition, in terms of developing appropriate marketing and education strategies, it can help in designing relevant marketing campaigns and conveying important information in a way that is attractive to generation Z.

Limitations to this research include: Digital banking adoption in generation Z with UTAUT2 may not be able to accommodate rapid context changes in technology and user preferences. Generation Z continues to adapt to technological developments and has different preferences from previous generations. UTAUT2 may not be able to capture these changes well. Then, it is possible that factors not captured by UTAUT2 could have a significant influence on generation Z's adoption of digital banks. For example, the security and privacy factors discussed earlier may have an important role in generation Z's adoption decision, but not explicitly included in UTAUT2. Future research could develop other factors outside of UTAUT2 that can capture behavior in rapid technological change in the context of digital banks.

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