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CONTINUANCE INTENTION TO USE OF DIGITAL BANK APPLICATION AMONG GEN X: A STUDY IN INDONESIA

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ABSTRACT

The critical nature of this study is reflected in the hesitation experienced when attempting to use online banking apps, particularly in areas without physical bank branches. These diverse conditions motivated an analysis of the intention to continue using such apps among Generation X bank customers. This study aims to analyze how the intention to continue using digital banking apps manifests among Generation X. The proposed model utilizes the UTAUT 3 framework and the Theory of Technology Continuation (TCT). The primary criterion for respondent selection is the use of digital banking apps for at least six months. The variables studied include income level, personal innovation, behavioral intention, usage behavior, perceived usefulness, system quality, intention to continue using, and digital literacy. The uniqueness of this study lies in the use of income level and digital literacy as moderating variables in the model. The main results indicate that digital literacy enhances personal innovation in usage behavior among Generation X.

KEYWORDS: Behavior Intention, Digital Bank, Digital Literacy, Personal Innovativeness, Perceived Usefulness.

1. INTRODUCTION

The development of information technology (IT) is presumed to support changes in strategies adopted by the banking industry. The procedure includes ensuring IT is a major indicator in the production process or service provision. This makes life easier, as well as requires companies to improve individual performances to meet customer satisfaction factors. In December 2016, the Otoritas Jasa Keuangan (OJK-Financial Services Authority) issued guidelines for the operation of digital branches of commercial bank. According to OJK, IT is an integral part of bank operations, given its crucial role in related activities. Both Islamic and conventional bank have identified the importance of shifting from traditional to digital systems to meet the increasingly complex needs of customers (Fatimah & Hendratmi, 2020). In 2021, an estimated 47.72 million digital bank account holders were recorded in Indonesia. This figure represents approximately 25% of the adult population in the country. The number of digital bank account holders is expected to reach 59.92 million, or 31% of the adult population, in 2022, representing a 25.66% increase compared to the previous year. However, in the next four years, the number of digital bank account holders is expected to increase by 24.7%, amounting to 74.79 million. This number is presumed to represent 39% of the adult population by 2026. The survey conducted by Finder.com, reported that regarding the number of digital banking account holders, Indonesia ranked second globally (katadata.co.id, 2022). This can serve as a reference to prove that the public is enthusiastic about digital banking.

The advancement of IT, particularly the digitization of the banking industry 4.0, led to an era where all related services were conducted online. In addition, there was no need for physical branch offices (Galazova & Magomaeva, 2019). Digital banking is beneficial to customers and enables bank to perform better (Alnemer, 2022), but it requires the introduction, dissemination, and implementation of electronic technology. Certain people are cautious of using this banking system due to the safety of personal information, including the dependability of services that do not require face-to-face communication. In this situation, possessing a solid grasp or understanding of digital literacy plays a crucial role. People show signs of interest in digital banking services before being actually used. Prior to the adoption process, users exhibited behavior that reflected personal interest. The exhibition of a particular behavior is triggered by the desire or intention to engage in certain activities (Sutanto, Ghozali, & Handayani, 2018). The numerous businesses must adopt behavior analysis to improve respective services. Companies need to understand the attributes and qualities leading to the preference of its brand over other industries that provide similar products and services. This inspired the need to study behavior intention and usage behavior. The innovation in the banking sector is evident in digital services. Additionally, variables associated with system quality, which have an influence on the use of digital bank, were incorporated into the analysis.

The application of Technology Continuance Theory (TCT) enabled the evaluation of the long-term viability of technology usage. Lesmana and Ashfath, (2022), conducted a study focused on determining the extent of the system's impact on users by applying the Technology Acceptance Model. Moreover, the extent to which a technology is preferred by its users is referred to as the acceptance level. The Unified Theory of Acceptance and Use of Technology (UTAUT) is among several models used to detect how people perceive and react to new forms of technology. This UTAUT built upon as well as improved the current technology acceptance theory. According to Venkatesh et al. (2003), when compared to other theories, the UTAUT model showed a success rate of roughly 70% in predicting the behavior intention of IT users (Venkatesh, Thong, Xu, 2012). As a technology acceptance model, UTAUT was derived from a combination of eight individual acceptance models, including TAM, TRA, MPCU, TPB, MM, and SCT (Lesmana & Ashfath, 2022). The model proved that behavior intention and use behavior were influenced by performance, and effort expectancies, including social influence, and facilitating conditions. In addition, these four factors were moderated by gender, age, and experience. Furthermore, moderating variables became less relevant (Farooq et al., 2017), and were replaced. Farooq et.al (2017), during the design of UTAUT3 incorporated the personal innovativeness variable which was used to determine the adoption of new technology. Inzaghi dan Priyono (2022) state that personal innovativeness has a positive effect on the the attitude toward using electronic payment.

Current research focuses heavily on Generation Z and Millennials (Generation Y). Examples include literature reviews by Medyawati, Hanifah, Suhendra, and Yunanto (2025) and Hartanti and Kurniawan (2025) in Indonesia, research in Vietnam by Pham and Bui (2025), and research in India by Sharma, Sharma & Singh (2024), Pokhrel and Anup (2023), Geebren, Jabbar & Luo (2020), and Savaneviciene, & Statnicke (2020), Arcand et al.

(2017). Very few studies specifically examine Generation X in relation to digital banking satisfaction. Based on data from Google Indonesia (2024), the number of Indonesians belonging to Generation X is estimated at 55-58.65 million. Gen X, which refers to individuals given birth between 1965 and 1980 (Britannica, n.d), tend to experience the transition from analog to digital era. This group is generally more cautious in adopting new technologies but have high adaptability when the benefits are proven. This group is an important part of the productive age population, accounting for 21.88% of the total population. In the 2024 (KPU, 2024) elections in Indonesia, data shows that the number of Generation X voters reached 57.5 million. Labor force data includes the 45-59 age group (16.14 million), the 50-54 age group (14.13 million), and the 55-59 age group (11.46 million). Generation X in Indonesia ranks third in terms of population size after Gen Z and Millennials (Gen Y).

The purpose of this study is to analyze income levels, personal innovation, use behavior, perceived usefulness, system quality, and behavior intention towards continuance intention related to the adoption of digital bank application in Gen X. The proposed model incorporated moderating variables, specifically digital literacy. The results were intended to improve models used to explore the diverse intention regarding the sustainable use of digital banking apps. In addition, the results could serve as a starting point and reference for bank when gauging customer interest in digital banking services.

2. LITERATURE REVIEW

2.1. UTAUT

As part of the theory development process, Venkatesh et.al (2003) integrated a comprehensive model termed UTAUT. In this context, the model provided insight regarding the use and acceptance of new technologies (Venkatesh et.al, 2012). Prior studies focused on the theoretical foundations of the acceptance process (Venkatesh, et.al 2012). Meanwhile, several factors had certain similarities in specific aspects, and culminated in a cohesive model, formulated by reviewing the various theories. This led to changes in the UTAUT framework between the initial launch and release of UTAUT 3, as shown in Figures 2 and 3. The objective was to provide an explanation of the interest in IT systems including the adoption process (Anjani & Mukhlis, 2022). According to UTAUT, people embraced and used technology if four essential criteria were met. This included performance, and effort expectancies, alongside social influence, and enabling conditions (Farooq et al., 2017). The intention to use analysis has led to widespread adoption of the UTAUT model. The development of the UTAUT model is shown in Figures 1 and 2.

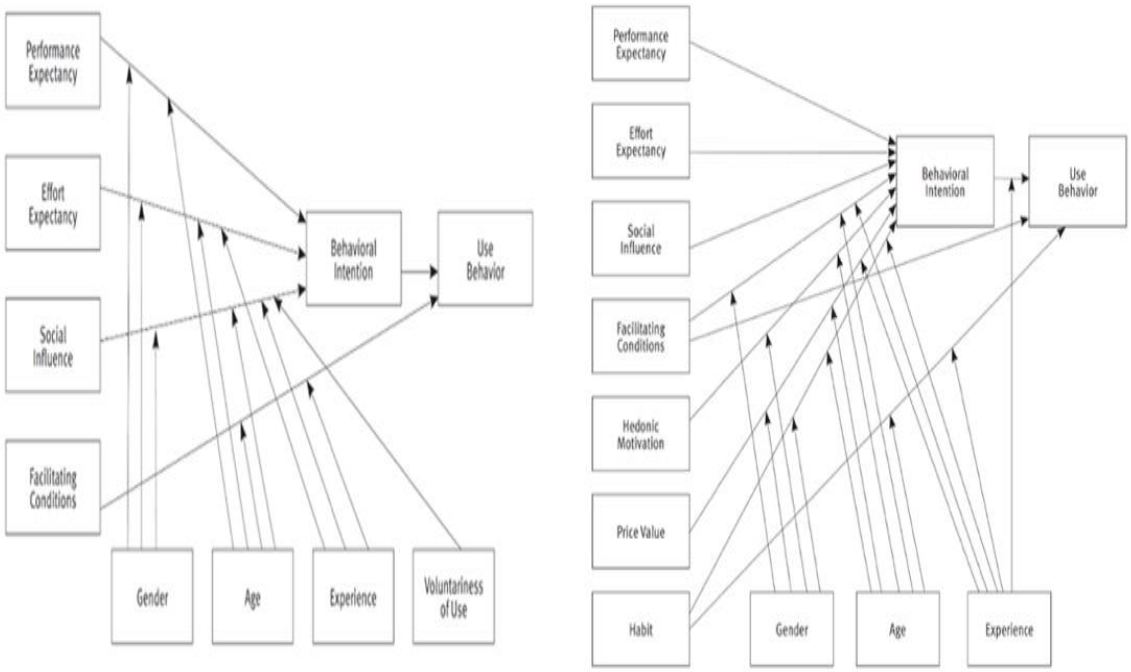

Figure 1: Framework UTAUT And UTAUT2 (Venkatesh Et. Al, 2012).

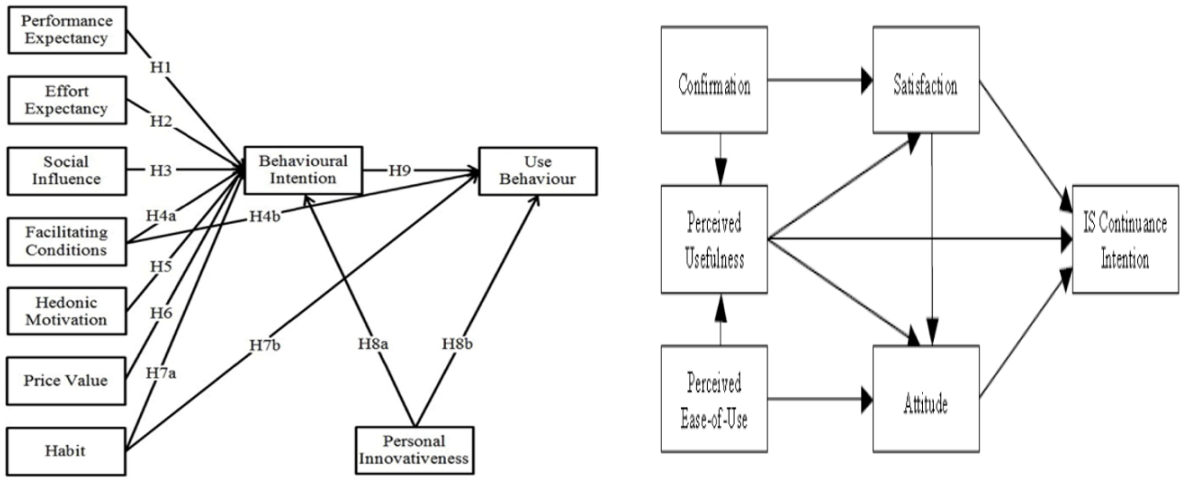

Figure 2: Framework UTAUT3 And TCT (Farooq Et. Al, 2012; Liao, Palvia & Chen, 2009).

A certain case study reported measuring 73% of the factors related to system acceptance using the UTAUT model produced better results than the TAM, which merely assessed only 63%. Venkatesh, et.al. (2012), developed UTAUT2 by adding several important variables, to facilitate the effective evaluation of the users' acceptance of technology. The independent variables comprised performance and effort expectations, as well as social influence, enabling conditions, hedonic motivation, price value, and habit. The addition of behavioral intention and usage behavior variables led to the similarities between UTAUT2 and UTAUT's dependent variable. The following moderating factors gender, age, and experience constituted UTAUT2, alongside independent and dependent variables. UTAUT2 had been widely used in several studies, resulting in significant input. However, Venkatesh et al. (2012), reported that over time mediating variables became less relevant, and was replaced. The UTAUT3 model included eight determinants of technology acceptance, namely performance, and effort expectancies, as well as social influence, facilitating conditions, habit, hedonic motivation, price value, and personal innovativeness. The main attribute impacting technology acceptance is personal innovativeness in the adoption of IT (Venkatesh et.al, 2012). Additionally, the level of inventiveness is a strong predictor of how quickly an individual embraces new technologies.

2.2. TCT

Liao, Palvia, and Chen (2009) reported that TCT is a framework responsible for evaluating users' intention to persist in using technology. This framework constituted three well-established measurement models, namely TAM (Davis, 1986), ECM (Bhattacherjee, 2001), and COGM (Oliver, 1980). Meanwhile, the six components of TCT were satisfaction, confirmation, perceived utility, and usability, attitude, and user continuation intention. The principal contribution was the integration of attitude and satisfaction into a single sustainable technology framework. ECM further examined the qualities that attracted users, rather than just the initial popularity, and this was aimed to ensure long-term success (Bhattacharjee, 2001). The TAM assessed users' initial acceptance of technology in a similar perspective (Famiyeh, Asante-Darko & Kwarteng, 2018). Satisfaction, which is a major factor in user behavior, was also a part of COG. The pre- and post-adoption phases of ECM, which included assessing users' intention to use technology, was made difficult by IS literacy. Therefore, the TCT was proposed to monitor how people behaved towards the adoption of new technologies (Kumar, Sujit, & Charles, 2018). TCT has shown greater explanatory power and acceptability, compared to ECM, TAM, and COG (Kumar et al., 2018). The framework proved that long-term use, and initial approval, supported successful service. Several previous studies by Hoehle, Huff & Goode (2012), Lin & Wang (2012), Alraimi, Zo & Ciganek (2015), Pattanayak, Koilakuntla & Punyatoya, (2017), and Rahi, Kahn & Alghizzawi (2021), have investigated the foundational elements of TCT. According to Lin and Wang (2012), the main factors influencing a user's motivation to continue with online learning were satisfaction level and perception of the platform's suitability. Alraimi et al. (2015), reported that users' intention to persist in using the technology was significantly impacted by perceived satisfaction and

utility. Based on this perspective, the role of ECM in maintaining trust in the online banking domain was discussed. Perceived benefits and expectation confirmation are two main elements that significantly impacted consumer satisfaction, including the desire to continue using online banking services, in line with the results.

The supplementary study conducted by Foroughi et al. (2023), reported that users' propensity to consistently engage in mobile banking was substantially influenced by technological continuity. The main advantage of TCT was that it unified satisfaction and attitude into a continuous model, while clearly defined variables for ease of use and usability were identified as foundational components (Weng et al., 2017). This framework is more desirable when compared to TAM, ECM, and COGM, because of the favorable assumption value throughout the life cycle. TCT also offered significant qualitative and quantitative improvements in explaining consumer attitudes at various stages of the confirmation process, unlike the other models. In quantitative terms, it represented a strong explanation for continuing intention and satisfaction. Qualitatively, TCT contributed theoretically to the combination of attitude and satisfaction, forming a continuous model (Weng et al., 2017).

2.3. Income Level

Personal income served as the data source, and the indicator referred to the amount earned in a month. The ability to manage cash inflows and outflows, invest in long-term opportunities, and organize finances according to respective needs is a reflection of a reasonable and responsible income level (Wang, Michelle, & Zhiyuan, 2018). Munisi, (2015), described income as the amount earned within a given period, typically calculated on a monthly or annual basis. Harma and Dubey (2009), reported that individuals with high-paying and established jobs tended not to perceive mobile banking as risky, compared to other customers. Certain studies reported that this variable was a significant factor responsible for strongly influencing the adoption rate (Sulaiman, Jaafar, and Mohezar, 2007), because people with higher incomes often had access to digital devices and the internet (Lohse, Bellman, & Johnson, 2000). Rogers (2003), reported that the early adopters of mobile banking were younger individuals with higher incomes. A study conducted in the United States found that higher incomes were associated with greater adoption rates. (Kolodinsky, Hogarth, & Hilgert, 2004). Arianti (2018), reported that there were four main indicators of income levels, namely: (1) elements, and (2) sources of income, (3) expenses, and (4) costs.

2.4. Personal Innovativeness

Personal innovativeness is the tendency of consumers to embrace new products. Moreover, individuals scored high on the innovativeness scale were open to trying new things, and possessed a great deal of energy, as well as exhibiting a natural curiosity. Customers open to trying new things had a more positive attitude towards these innovative services (Al-Jabri & Sohail, 2012). Simarmata's research (2020) shows that the use of IT gradually increases's innovative capacity and intention. Personal innovativeness was measured as the extent to which individuals were willing to try and adopt new technologies (Jeong & Choi, 2022). According to Rogers' (2003) theory of innovation diffusion, individuals with high personal innovativeness were expected to adopt innovations earlier. In this regard, personal innovation refers to the ability of individuals to use new information systems in the era of Industry 4.0 (Alif & Sudiana, 2023). Kalinic et.al, (2019), focused on the four main indicators, namely: (1) discoveries, (2) being the first, (3) willingness to adopt, and (4) wanting to try.

2.5. Behavior Intention

Behavior intention is a variable that influences usage behavior (Tomić, Kalinic, & Todorovic, 2022). Furthermore, the UTAUT model (Esawe, 2022), reported that behavior purpose had a positive influence on user behavior. This metric represented the propensity to continue using a specific technology (Rachmawati et al., 2020). Behaviour intention also refers to an evaluation of the strength of an individual's desire to perform a particular act, along with the probability of using the system (Tolba & Youssef, 2022). This variable included driving factors that influenced individual behavior towards specific actions (Chaveesuk et.al, 2022). The present study adopted aspects of performance, and effort expectancy, social influence, and enabling circumstances. Prior analyses reported that behavior intention denoted the extent to a person desire to use technology (Mufingatun, et.al, 2020). This theory posits that conduct is subjective and people are inclined to engage in specific actions when the behavior is endorsed by majority (Chaveesuk et.al, 2021). Additionally, the variable was regulated by three main indicators (Tiwari, Tiwari & Gupta, 2021), namely (1) Intention to use, (2) Use for needs, and (3) Intend to make the best possible use of an item or technology.

2.6. Use Behavior

Use behavior is the frequency with which people use IT, and based on the assumption that system engagement enhanced job performance (Anjani, & Mukhlis, 2022). Information Technology tend to be adopted if the user expresses interest in the system. The analysis of system users had a great impact on IT usage. This variable (Puriwat, & Tripopsakul, 2021) is regulated using four indicators, such as (1) regular usage, (2) daily application, (3) business use, and (4) frequent usage.

2.7. Perceived Usefulness

Technology is viewed as a tool that can enhance the efficiency, accuracy, and productivity of users (Lee, Xiong, & Hu, 2012). The perceived usefulness heavily influences a user's decision to complete a purchase. The functionality of a system triggered its usage intention. However, the perceived usefulness of a technology is the degree to which the users think it would improve respective efficiency and effectiveness. Rizkyla's research found that perceived usefulness significantly influences the willingness to use digital banking among Gen Y and Gen Z. Perceived usefulness also refers to when a system or piece of technology is believed to help perform certain jobs more effectively (Junawan & Damanik, 2018). The main indicator of this variable is an increase in operational activities, along with a potential rise in user engagement resulting from improved performance. Individuals and businesses alike experience performance improvement, depending on the importance of the technology used (Al-Fahim, Jusoh & Abideen, 2016).

2.8. System Quality

An effective system functions as intended and does not cause any problems for the users (Haryanto & Widyastuti, 2018). Quality plays a crucial role when assessing the efficacy of an information system (DeLone & McLean, 2003). In this context, the effectiveness and usage of the system is dependent on the quality. Yuliasari, (2014), reported that quality sound system produced positive feedback from the users and also influenced usage, thereby affecting the expectations of personal results and self-efficacy (Alruwaie et al., 2020). This is a reflection of the constituent software and hardware. DeLone and McLean (2003), stated that system quality was based on individual measurements of the system. People who had an elevated level of satisfaction tended to rate the system quality highly. Individuals who rated system quality as dwindling had lower satisfaction levels (Chung & Kwon, 2009). This variable is closely related to user satisfaction, where the conveniences of system reach, and learning or usage, user restrictions, flexibility, and consistency increased user satisfaction. The five indicators (Hernandez & David, 2022), comprised (1) ease of use, (2) system reliability, (3) speed, (4) ease of access, and (5) security.

2.9. Continuance Intention To Use

Permana et al. (2022), defined continuance intention to use as the behavior of consumers with certain expectations of a service or technology before usage. The consumers would consider whether to continue or stop using the service, after the initial encounter. The intention to continue using technology after the initial adoption phase is referred to as continued use intention (Bhattacherjee, 2001). Monica and Briliana (2020), reported that the desire to continue using technological application is expressed when discussing sustainability. According to Tekaqnetha & Rodhiah (2020), adopters' decision to persist follows the initial acceptance decision, and sustainable use refers to the ongoing usage of information systems. Consumers who are unsatisfied with the service or product are unlikely to use it again. The consistent use, habitual engagement, opt to adopt, and inclination to endorsement were considered a significant indicator of sustainable usage (Gultom, Setyawan, & Laksono, 2023).

2.10. Digital Literacy

Digital literacy is the ability to understand, use, and evaluate information through digital technologies, including computers and mobile devices. Hwang et al. (2023), reported that digital literacy comprised technical ability, including an understanding of how to use technology safely and ethically. The study by Prior et.al (2020), reported that this variable had a significant impact on the effectiveness of online learning, specifically in contexts where students were expected to access and evaluate digital learning resources independently. This study outlined the importance of teaching related skills in school, thereby empowering students to participate in the rapidly evolving digital economy. It was found that people with higher levels of digital literacy accepted new technologies based on individual perceived ease of use (Yamin & Lee, 2020). The main objective of numerous training and education programs at the individual and organizational level, is the improvement of digital literacy (Culver & Grizzle, 2021). Tiffani (2023), reported that four indicators regulated digital

literacy, namely (1) Ability to use a smartphone, (2) Supporting facilities, (3) Ability to use application, and (4) Understanding the user interface

Based on the description of previous results in determining the proposed framework, the relationship between variables and formulated hypotheses were as follows:

H1: Income level affected users' behavior intention towards digital banking application.

H2: Personal innovation affected users' behavior intention towards digital banking application.

H3: Personal innovation affected use behavior among users of digital banking application.

H4: Behavior intention influenced use behavior among users of digital banking application.

H5: Behavior intention influenced the continuous intention to use among users of digital banking application.

H6: Use behavior influenced continuous intention to use among users of digital banking application.

H7: Perceived usefulness influenced sustained use intention among users of digital banking application.

H8: System quality affected the intention to continue using digital banking application.

H9: Digital literacy strengthened/weakened the influence of income level on behavior intention among users of digital banking application.

H10: Digital literacy strengthened/weakened the influence of personal innovation on behavior intention among users of digital banking application.

H11: Digital literacy strengthened/weakened the influence of personal innovation on usage behavior among users of digital banking application.

Figure 3 shows the proposed model that comprises all the variables described above.

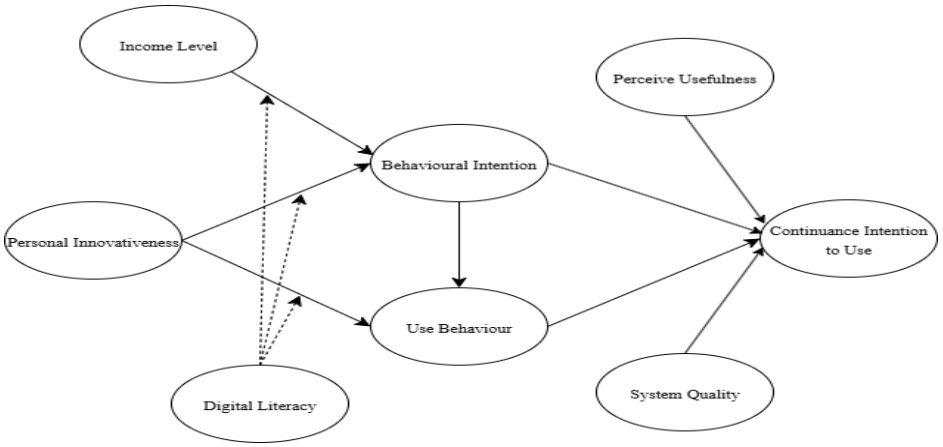

Figure 3: Conceptual Framework.

Source: Haryanto Et Al. (2023), Liao, Palvia, & Chen (2009), Prathama & Harsono (2023), Sabarudin & Razak (2021), Wardana (2023)

This study proposes a conceptual framework in which trust, perceived usefulness, and satisfaction are key determinants of continuance intention in digital banking. Trust plays a fundamental role in reducing uncertainty and perceived risk, particularly for Generation X users who tend to be more cautious in adopting financial technologies. Perceived usefulness reflects the extent to which users believe that digital banking enhances their transaction efficiency and overall performance. Meanwhile, satisfaction represents users' post-adoption evaluations of their experience with the system. These constructs are interrelated: higher perceived usefulness and trust are likely to increase user satisfaction, which, in turn, strengthens continuance intention. Therefore, this study positions satisfaction as a critical outcome of prior beliefs and a direct predictor of continued usage behaviour (Figure 4).

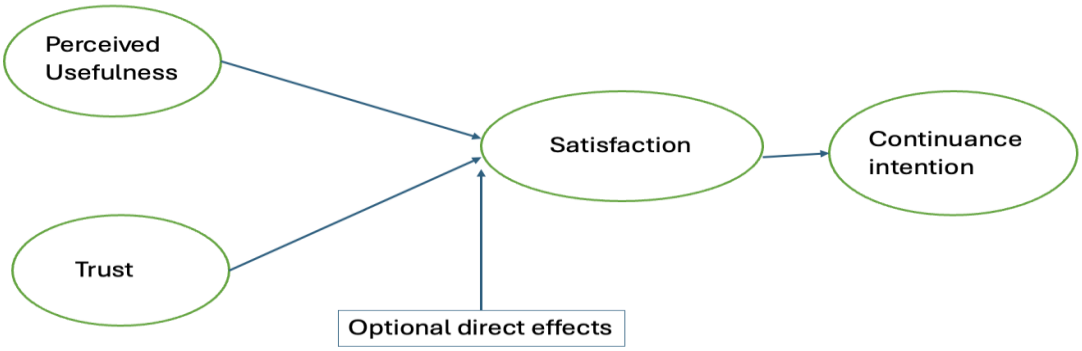

Figure 4: Conceptual Framework for Trust, Perceived Usefulness and Satisfaction.

3. RESEARCH METHOD

The criteria for the selection of respondents were Gen X individuals who had been digital bank users for less than six months, possessed knowledge of the system, and resided in Indonesia, specifically West, East, and Central Java, as well as North Sumatra, Banten, and DKI Jakarta. The population size was enormous and could not be determined with certainty.

As a result, the sample size was calculated using Cochran's formula (Cochran, 1977), which was stated as follows:

$$n = \frac{Z^2 \, x \, P(1-P)}{e^2}$$

Description:

n = number of samples, Z = statistic (for a confidence level of 95% or sig. 0.05)

P = maximum estimated proportion, d = absolute precision/alpha/sampling error

Using a confidence level of 95% or Z = 1.96 (normal distribution table) with a maximum estimate and error rate of 50% (0.5) and 5% (0.05), respectively led to the following calculation:

$$\frac{1{,}96^2 \, x \, 0{,}5(1-0{,}5)}{0{,}05^2} = 384{,}16$$

Based on the calculated results, the minimum number of samples was 384. Mugahed (2022), suggested recruiting more respondents than the minimum number, after the sample size was calculated statistically. After reviewing the entire dataset, only 389 were completed and processed. The type of data used in this research was primary information using a quantitative approach, obtained through the distribution of online questionnaires using Google Forms through social media such as WhatsApp, Facebook (Digital Bank Forum) and Instagram.

The questionnaire included a statement that respondents' participation would help researchers gather valuable insights and advance scientific knowledge in this field. The questionnaire clearly states that completing it is **voluntary** and not coerced (Participation was voluntary, and all respondents provided informed consent before completing the survey). This research is non-interventional; respondents may choose not to participate or withdraw from this study at any time, without penalty or loss of benefits to which they are entitled. There are no known significant risks associated with participating in this study. Respondent will not be asked any uncomfortable questions. Although there may be no immediate benefit to respondents, their participation will contribute to research that may benefit others in the future. All information collected in this study will be kept strictly confidential. Respondents' identities will not be disclosed in any publications or presentations resulting from this study. Data will be stored securely and will only be accessible to the research team. The data collection period is from June to September 2025.

3.1. Informed Consent

Informed consent was obtained from all participants **verbally and implicitly** prior to their participation in the study. Before completing the questionnaire, respondents were provided with a clear explanation of the study objectives, procedures, voluntary nature of participation, anonymity of responses, and their right to withdraw at any time without consequences. Verbal (non-written) informed consent was deemed appropriate because the study involved **minimal risk**, did not collect personally identifiable or sensitive data, and relied on an **anonymous self-administered survey**. Requiring written informed consent could have compromised respondent anonymity and potentially reduced participation rates. Participants' decision to proceed with and complete the questionnaire was considered evidence of their informed consent.

3.2. Ethical Considerations

This study involved human participants through a voluntary questionnaire survey. However, formal ethical approval was not required because the study did not involve medical or psychological interventions, experimental manipulation, or sensitive personal data. All data were collected anonymously, and no identifiable information was obtained. Participation was entirely voluntary, and respondents were informed about the purpose of the study and their right to withdraw at any time. Therefore, this research falls under minimal-risk social and behavioral research and complies with ethical principles of informed consent, anonymity, and confidentiality.

Data processing using PLS-SEM focused on validity and reliability tests (outer model), including the inner model. **The outer model stages** consisted of convergent and discriminant validity testing, as well as construct reliability. However, convergent validity testing examined the strength of the relationship between the indicators and construct being measured. This was achieved by assessing the factor loading, where the expected value was greater than 0.7. Discriminant validity testing reviewed whether each construct distinctly differed from the other. The result was realized through cross-loading and Average Variance Extracted (AVE) values. The loading value on the construct must be greater than the others. Additionally, the AVE value must be greater than 0.5 to show good discriminant validity. This was evaluated through the Fornell-Larcker criterion, HTMT, and cross-loading. Construct reliability testing measured the internal consistency of the construct being measured. The test was carried out using Composite Reliability (CR) or Cronbach's Alpha. The expected CR and Cronbach's Alpha values were greater than 0.7 (or 0.5-0.6 for exploratory study), and at least 0.7, ideally 0.8 or 0.9, respectively. **The inner model stages** comprised several major steps used to evaluate the causal relationships between latent variables. This included assessing the significance of relationships through path coefficients, evaluating R^2 values in respect to measure explained variability, and validating the overall model by performing the following tests Goodness of Fit (GoF-SRMR value) and Q^2-predictive relevance. The variables applied, alongside the respective definitions, are shown in Table 1.

Table 1: Operational Definition of Variables.

Variable	Definition	Indicators	Scale
Income Level	Total income received by individuals in a month (Aditya & Azmansyah, 2021)	• Elements of income • Sources of income • Expenses Arianti (2018)	Ordinal
Personal Innovativeness	Refers to a person's attitude that reflects the tendency to experiment and adopt new advances in information technology independently. (Farooq et al., 2017)	• New discoveries • Be the first. • Be ready to adopt • Want to try (Kalinic et al., 2019)	Ordinal
Behavioral intention	Behavior patterns that show the desire or willingness to purchase or use a product or service. (Julyazti et al., 2023)	• Intention to use • Use for needs • Intend to make the best use of (Tiwari et al., 2022)	Ordinal
Use Behavior	Customer intensity in using a technology. (Venkatesh et al., 2012)	• Frequent use • Regular use • Use in daily life • Use for business purposes (Puriwat & Tripopsakul, 2021)	Ordinal
Perceived Usefulness	Individual belief that the application of technological innovation can simplify work and increase productivity levels. (Hurani & Abdel-Haq, 2025)	• Work more quickly • Useful • Effectiveness • Easier • Performance (Kumala et al., 2020)	Ordinal
System Quality	Includes operational reliability, flexibility, integration capabilities, ease of use, and response speed. (Li & Zhu, 2022)	• Ease of use • System reliability • System speed • Ease of access • System security (Hernandez & David, 2022)	Ordinal

Continuance intention to use	Individuals' tendency/intention to continue using the system/service in the future (He & Li, 2023)	• Always use • Use regularly • Decide to use • Willing to recommend (Gultom et al., 2023)	Ordinal
Digital Literacy	The ability of individuals to access, understand, and critically analyse information through the effective and responsible use of digital technology. (Avinç & Doğan, 2024)	• Ability to use a smartphone • Supporting facilities • Ability to use application • Understanding of user interface (Tiffani, 2023)	Ordinal

4. RESULT AND DISCUSSION

4.1. Respondent Profile

The respondents were Indonesians residing in the provinces of West, Central, and East Java, as well as North Sumatra, Banten, and DKI Jakarta who used digital banking application. A total of 389 respondents participated in this study, and data acquired from being asked to rate a list of statements, provided valuable results regarding certain conditions, including age, education, duration of using digital banking, domicile, digital bank used, occupation, and monthly income. The purpose was to obtain a clear and accurate picture of the respondents as the study subjects. A total of 389 respondents aged 45–60 was selected from a screening process that identified those who met the Generation X criteria. Gen X focused on security, reliability, transaction costs, ease of paying bills/installments, and support services. These factors increased satisfaction and trust, as well as drove continued usage intention.

The respondent profile showed that 44% were bachelor's, 31% high school graduates, 20% diploma, and 5% postgraduate degree holders. As a result, the composition was practically divided between secondary (high school and diploma = 51%) and higher education (bachelor's and postgraduate degrees = 49%). Based on an economic-behavioral perspective, highly educated groups had more mature digital and financial literacy (Belascu et al., 2023), appreciated value-added features such as personal finance management/budgeting, micro-investments, multi-accounts, and service reliability. This combination typically strengthened the intention for continued use through perceptions of performance/usefulness and service quality. However, respondents with secondary education prioritized ease of use (brief flow, clear interface language, visual guides), as well as informative notifications, ensuring continued use was easily driven by trust/security.

The respondents were divided into two groups based on individual digital bank usage period: 1–3 months (42%) and 4–6 months (58%). The dominance of users that had been using the system for 4–6 months showed majority of the respondents passed the initial adoption phase and were starting to form repeated usage patterns with wider variety of transactions. In this group, continuance intention was typically supported by service quality, system reliability, and trust/security. However, users who had been using the system for 1–3 months were in the post-adoption evaluation stage (confirmation of expectations), resulting in being sensitive to the following factors ease of flow, speed, onboarding support, and cost clarity. These were the main determinants of the intention to either stay or leave.

The regions with the highest number of respondents, included DKI Jakarta (25.3%) and West Java (23.3%). This reflected greater adoption rates in large cities with more advanced digital infrastructure. The following regions North Sumatra, Central Java, Banten, and East Java constituted 9%, 16%, 11%, and 16% of respondents, respectively. As the country's capital and economic center, Jakarta naturally has greater internet penetration and better access to digital services. In the financial context, this showed that the digital banking market in urban areas was more developed, opening up opportunities to focus on regions with greater growth potential outside Jakarta. Although the awareness of digital banking services is present outside Jakarta, the adoption rate remained relatively low. The most relevant data providing a mapping of provinces/districts was from the National Survey of Financial Literacy and Inclusion (SNLIK) by the OJK (conducted in collaboration with BPS) in 2024 (OJK, 2024).

The percentage of respondents using digital bank is as follows, the market appeared fragmented, with no dominant players. SeaBank and Bank Neo Commerce (BNC) had the highest shares, at 17% each, followed by Bank Jago and blu by BCA Digital, at 16%. Allo Bank had 12%, with Bank Raya and HiBank possessing 11% each. This pattern suggested that the adoption was influenced by a combination of ease of use (Muchtar, 2024; Oliveira, Thomas, Baptista, & Campos, 2016), cost transparency (CGAP, 2020), reliability (Musyafi, 2024), ecosystem

integration (QRIS/e-commerce) (Bank Indonesia, 2022), and incentives (interest/promotions) (Rahi, Ghani & Ngah, 2020) that differed between bank.

The most significant number of respondents were employees/private sector workers (41%), followed by self-employed individuals (21%), civil servants (18%), university students (16%), and homemakers (4%). This composition showed differing needs and drivers of sustainable intention by economic roles. Employees required speed, reliability, and payroll/auto-debit integration for routine transactions that strengthened usage habits. Self-employed individuals prioritized ease of receiving payments (QRIS/VA), invoicing, limit flexibility, and cost efficiency due to fluctuating cash flow. Civil servants concentrated on security, service certainty, and cost transparency for salary transactions, installments, and obligations. University students were more responsive to simple user interfaces, e-wallet top-ups, digital ecosystem integration, and promotions that intensified habit formation. Meanwhile, homemakers predominantly used bill payments, household transfers, and budgeting features.

4.2: Results Of the Summary of Respondents' Responses for Each Variable

The highest percentage of questionnaire statements containing respondents' responses to income levels is the statement, 'my monthly salary is my source of income.' Majority agreed that salary was the main source of income, with allowances and bonuses serving as additional support. Among the income items, agreement on bonuses was the most prominent. At the same time, businesses/enterprises received relatively lower agreement compared to the other three sources, although majority strongly agreed. This represents an income structure that relies on salary with the support of company incentives, and business/enterprise did not play a dominant role. The condition was in line with the results of Lee et al. (2017), that in Taiwan's real estate brokerage industry, a salary structure comprising base amount and bonuses (both individual and group) had a significant impact on performance. However, the type of business did not significantly affect performance. This was similar to the condition where the income structure largely depended on salary and incentives.

Regarding the personal innovation variable, the highest score was on item 5 – "When I see new technology, I am willing to use it." (score value 1741). This pattern showed the readiness and strong willingness to use new technology when available (Item 5), accompanied by a tendency to enjoy the trial process (Items 2 and 4). Simultaneously, the identity as an "innovator/first mover" was not particularly prominent (lowest score on Item 3): most respondents were more comfortable being early adopters/early majority willing to try after the initial signs or evidence.

The highest percentage for the variable' behavior intention' is the statement 'I intend to use a digital banking app because I have access to the internet'. The intention to use digital banking application is high when connected to internet access, feature completeness, and scheduled routine transaction needs (Nissi, Simovic, & Antonijevic, 2023). The main obstacle centered on the readiness to make the app the main channel for all banking needs (item 3 is still largely neutral). Practical implications included strengthening automatic payment features, enhancing cost transparency, and providing a comprehensive feature experience (savings, investment, and loans) with straightforward onboarding. Therefore, the "neutral" segment was motivated to switch to complete and sustainable use.

The highest scores were assigned to instalment payments through digital bank, followed by using QRIS and payments to suppliers. These results showed that perceptions of performance/usefulness mainly drove continued use (Bhattacherjee, 2001) and trust/security in routine payment processes (Pavlou, 2003). As a result, the optimization of auto-debit, reconciliation (Bank for International Settlement-BIS, 2018) and real-time transaction confirmation features had the potential to maintain and deepen usage intensity (Continuity concept by, Oliviera, Thomas, Baptista & Campos, 2016).

Item 1' using a digital banking app allows me to complete transactions faster (1776) was the highest score, 'followed by Item 5 'using digital bank apps improved the effectiveness of financial management'(1768) and Item 8 'the pocket feature on the digital banking app makes it easy for me to separate funds according to my needs'(1761), which represent the strong benefits of financial management and the "pocket" feature. However, the lowest score on Item 11 (1734) showed that the account opening experience was not as smooth as the daily features, with Items 6 (1739) and 10 (1740) relatively lower, suggesting the reminder and financial performance tracking features were not yet optimal. Digital banking application were considered helpful (Bapar, Bapar, Hussain, & Shah, 2023; Susanto, Manek, Setiawan, & Mustikasari, 2023), and the priority for improvement centered on simplifying onboarding as well as increasing feature

activation while maintaining the advantage of speed (Aamer & Milani, 2023).

The highest score for the statement on system quality variables was found in item 'I feel safer because the system reminds me to check the recipient's account details' (score 1728). This statement concerns a sense of security because the system reminds users to check the details of the recipient's account (Al Zaabi & Tusaibhat, 2015), followed by item 'The digital banking app processes my requests in real time' (score 1721) on real-time processing and item 'the digital banking application system is easy to access anytime' (score 1720) on ease of access at any time (Windasari, Kusumawati, Larasati & Amelia, 2022; Herman & Mehta, 2024). The items confirmed the main strengths of digital banking application in terms of security, performance, and availability (Iqbal et al., 2024). The lowest score appeared in item 'the digital banking app provides a clear confirmation menu before I make a transfer' (1698) related to the clarity of the confirmation menu before transfer. The item shows that the operating system still needed to be simplified and clarified (Naufal, Ahsyar, Jazman, & Permana, 2024). The statement items 'I did not experience any delays when conducting transactions using the digital banking app' and 'The digital bank I use rarely experiences network disruptions' received relatively lower scores (1702) related to network disruptions and delays, showing room for improvement in reliability (Donath, Mircea, Neamtu, Noja, & Sirghi, 2024).

4.3: Outer Model

The summary of the outer loading values for all statements in convergent validity test was within the range of 0.766 - 0.875. It was concluded that all statements were valid. The summarized cross-loading results of the convergent validity test were within the range of 0.766-0.883. The following is the results of the reliability, and Fornell Larcker tests, including HTMT (Table 2 and Table 3).

Table 2: Reliability Test Result Gen X.

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
IP	0.945	0.946	0.954	0.721
KS	0.963	0.963	0.967	0.710
LD	0.956	0.957	0.962	0.719
NB	0.920	0.921	0.938	0.715
NPB	0.946	0.947	0.954	0.672
PK	0.963	0.964	0.968	0.732
PP	0.956	0.957	0.961	0.693
TP	0.943	0.944	0.953	0.717

Table 3: Fornell-Lacker's Result Gen X.

	IP	KS	LD	NB	NPB	PK	PP	TP
IP	0.849							
KS	0.452	0.843						
LD	0.460	0.428	0.848					
NB	0.704	0.499	0.710	0.845				
NPB	0.701	0.730	0.660	0.811	0.820			
PK	0.437	0.488	0.424	0.444	0.675	0.856		
PP	0.754	0.448	0.720	0.837	0.790	0.416	0.839	
TP	0.465	0.433	0.453	0.692	0.581	0.304	0.530	0.847

Description: IP = personal innovativeness; KS = system quality; LD = digital literacy; NB = behavioural intention; NPB = continuance intention to use; PK = perceived usefulness; PP = use behaviour, TP = income level

The CR proved that all indicators were consistently used to measure the variable. Cross-loading, the Fornell-Larcker criteria, and the heterotrait-monotrait ratio (HTMT) were used to assess discriminant validity. Meanwhile, the Fornell-Larcker score was improved by eliminating the highest correlation, detected in the PP7 indicator. The results of the cross loading (after Fornell-Larcker process) showed that all indicators used to assess the individual variables met the discriminant validity, with cross loading values exceeding 0.7. The results satisfied this condition. All HTMT values in Table 4 shows that all construct were valid in terms of discriminant validity based on associated calculations.

Table 4: Htmt Value Gen X.

	IP	KS	LD	NB	NPB	PK	PP	TP
IP								
KS	0.471							
LD	0.481	0.446						
NB	0.751	0.528	0.756					
NPB	0.739	0.763	0.692	0.864				
PK	0.458	0.505	0.442	0.469	0.704			
PP	0.790	0.463	0.749	0.886	0.830	0.431		
TP	0.489	0.455	0.475	0.743	0.612	0.317	0.554	

Description: IP = personal innovativeness; KS = system quality; LD = digital literacy; NB =

behavioural intention; NPB = continuance intention to use; PK = perceived usefulness; PP = use behaviour, TP = income level

4.4. The Inner Model

The inner model consisted of SRMR value and R Square value (Table 5), Q Square and F Square values shown in Table 6 and 7, and also the Hypotesis testing result shown in Table 8.

Table 5: SRMR And R-Square for Gen X.

	Saturated Model	Estimated Model
SRMR	0.052	0.054
d_ULS	7.683	8.216
d_G	7.871	8.251
Chi-Square	6637.162	6654.398
NFI	0.680	0.679
	R Square	**R Square Adjusted**
NB	0.771	0.766
NPB	0.881	0.879
PP	0.804	0.800

NB = behavioral intention; NPB = continuance intention to use; PK = perceived usefulness; PP = use behavior

R-squared measured how much of the variation in the dependent variable was explained by the independent variables in the model. Approximately 77.1% and 76.6% of the variation in behavior intention was explained by the independent variables used. In addition, the R^2 value showed that the model had good predictive power.

Table 6: Q-Square Value.

	SSO	SSE	Q^2 (=1-SSE/SSO)
NB	1266.000	590.561	0.534
NPB	2110.000	892.649	0.577
PP	2110.000	944.901	0.552

NB = behavioural intention; NPB = continuance intention to use; PK = perceived usefulness; PP = use behaviour

The Q^2 value in Table 6, shows how well the model predicted the observed variable values based on data acquired. Generally, a Q^2 value greater than 0.35, implied that the model made fairly accurate predictions for the analyzed variables.

Table 7: F-Square for Gen X.

	IP	KS	LD	M-1	M-2	M- 3	NB	NPB	PK	PP	TP
IP							**0.326**			**0.203**	
KS								**0.591**			
LD							**0.395**			0.140	
M-1							**0.001**				
M-2							**0.001**				
M-3										0.052	
NB								**0.177**		**0.193**	
NPB											
PK								**0.421**			
PP								**0.227**			
TP							**0.275**				

Description: IP = personal innovativeness; KS = system quality; LD = digital literacy; NB = behavioural intention; NPB = continuance intention to use; PK = perceived usefulness; PP = use behaviour, TP = income level

The following description is the result of data processing or statistics related to validity and reliability tests (Outer model), R, F, and Q-squares, including ideal fit model/SRMR (Inner Model) values.

Table 8: Hypothesis Testing Gen X.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Description
TP -> NB	0.349	0.354	0.049	7.085	0.000	Sig.
IP -> NB	0.360	0.359	0.042	8.485	0.000	Sig.
IP -> PP	0.299	0.303	0.067	4.441	0.000	Sig.
NB -> PP	0.354	0.344	0.081	4.350	0.000	Sig.

NB -> NPB	0.276	0.276	0.054	5.078	0.000	Sig.
PP -> NPB	0.302	0.304	0.050	6.092	0.000	Sig.
PK -> NPB	0.267	0.269	0.034	7.895	0.000	Sig.
KS -> NPB	0.326	0.329	0.040	8.155	0.000	Sig.
Moderating Effect 1 -> NB	0.014	0.018	0.040	0.340	0.734	Insig.
Moderating Effect 2 -> NB	-0.018	-0.020	0.033	0.546	0.585	Insig.
Moderating Effect 3 -> PP	-0.063	-0.064	0.020	3.221	0.001	Sig.

Description: IP = personal innovativeness; KS = system quality; LD = digital literacy; NB = behavioural intention; NPB = continuance intention to use; PK = perceived usefulness; PP = use behaviour, TP = income level

4.4.1. Analysis Of Income Level to Behavior Intention (P-Value: 0.000)

The effect of income level on behavior intention was significant, implying that differences in income among Gen X respondents greatly determined the willingness to use digital banking. The higher the income, the greater the intention to use digital banking. Gen X with higher incomes showed a stronger behavior intention to use this service. Despite the limited studies on Gen X, it was reported severally that demographic factors namely income, moderated the intention to use digital financial technology. For example, Apau and Lallie (2022) found that it strengthened the behavior intention to use mobile banking application. Economically, income increased the "ability to pay" (data packages, devices, admin fees) as well as the "opportunity cost of time": the more expensive the time, the more valuable the time-saving features (instant transfers, QRIS, auto-debit). For Gen X with dependents/assets/businesses, the life phase triggers increased transaction complexity. Application that integrated payments, investments, and credit were considered a cost-effective substitute for branch visits. In addition, respective transactions were more complex (such as instalments, investments, and children's school fees), triggering the value of digital features that sped up transactions.

4.4.2 Analysis of Personal Innovativeness to Behavior Intention (P-Value: 0.000)

The variable personal innovativeness drove usage intention. Tech-curious Gen X were quicker to discern relative advantages and lower risk assessments. These individuals responded favorably to messages such as "try the new feature." The effect of IP was slightly greater than that of TP, showing psychographic factors were as powerful as mainly economic variables in shaping intention. Personal innovativeness refers to an individual's tendency to try new technologies early and feel comfortable experimenting (Agarwal & Prasad, 1998; Rogers, 2003). In Gen X, this trait often arose from the need for efficiency (time is increasingly expensive), professional experience (familiarity with work systems), and financial autonomy (the ability to make technological decisions without others' "permission").

4.4.3. Analysis Of Personal Innovativeness to Use Behaviour (P-Value: 0.000)

The variable personal innovation significantly influenced use behavior. This proved that individuals with the tendency to accept innovation used technology more frequently in daily activities (Sang & Ha, 2025). Personal innovation refers to an individual's tendency to try new technologies early and feel comfortable experimenting. Gen X with high IP usually start with low-risk use cases (phone credit, e-wallets), then migrate to routine payments (electricity, water, internet, children's school fees, insurance premiums). This group were generally more risk-averse than Gen Z, and innovation enabled the management by adopting a strategy of trying less initially, followed by scaling up the process.

4.4.4. Analysis Of Use Behavior to Continuance Intention to Use (P-Value: 0.000)

Gen X tends to continue using digital banking if the service is perceived as easy and convenient. High usage behavior reduced barriers encountered by older users during digital transactions (Susanto et al., 2024). For example, a simple and user-friendly app interface made Gen X feel confident and less frustrated, resulting in the willingness to use it regularly. The more digital banking features (e.g., checking balances daily or paying bills weekly) are used, the greater the familiarity and comfort developed. Modern digital banking apps offered a variety of functions including transfers, bill payments, top-up credit, investments, and loans in an instant. For Gen X, the more functions successfully used, the greater the perceived utility.

4.4.5. Analysis Of Behavioral Intention – Continuance Intention to Use (P-Value: 0.000)

The Expectation-Confirmation Theory (ECT) stated post-adoption satisfaction and continuance

intention were strongly influenced by consumers' initial experiences that met respective expectations. This proved that when Gen X initiate digital banking with expectations of specific benefits, the confirmation would drive satisfaction and long-term commitment (Apau & Lallie, 2022). The individuals are typically a busy age group (middle-aged workers with family responsibilities) and hence value time efficiency and convenience. Initial intention to use digital banking were often driven by rational motivations to save time and effort. For example, the ability to conduct transactions at any time and from anywhere without having to visit a branch office. The preference for security and stability ensured that once a digital platform is trusted, the attribute fostered loyalty and continued use. Repeated positive experiences formed new financial habits and inertia, making Gen X reluctant to revert to old ways or switch to other services.

4.4.6. Analysis Of Behavioural Intention to Use Behaviour (P-Value: 0.000)

Gen X tended to use an app when the perceived benefits (time savings, feature access, financial control) outweighed the total costs (learning costs, time, and financial costs). This group stands at the crossroads between conventional and digital banking. Many are tech-savvy yet remain cautious about adopting new financial innovations. In the context of digital banking, behavior intention is a crucial indicator of whether an individual will use the service. It simply implied that when Gen X consumers have a firm intention to try a digital bank service, the desire is translated into actual action (Daragmeh, Lentner, & Sagi, 2021; Santosa et al., 2021). However, the transition from intention to actual use does not happen automatically, because various behavior economic factors and unique Gen X characteristics influence whether the intention is translated into new habits

4.4.7. Analysis Of Perceived Usefulness to Continuance Intention to Use (P-Value: 0.000)

This generation born before the digital era was initially considered reluctant to switch to digital banking services. However, in reality, the individuals are increasingly adopting mobile and internet banking, specifically since the COVID-19 pandemic motivated the use of remote services. The main factors behind the high adoption and intention to continue using digital banking services in this segment (Gen X) is the perceived usefulness of these services (Priyani, Maryam, & Yani, 2021). In the context of digital banking, it refers to the extent to which customers perceive online services as providing practical benefits, such as saving time, simplifying financial management, reducing costs, and enhancing security. The real experience of feeling useful reinforced Gen X's belief that digital bank was worth using continuously. For this group of individuals, who are generally at the peak of the productive age and busy managing individual careers including families, time is a valuable economic resource. Moreover, digital banking services offered significant time savings compared to traditional related concepts.

4.4.8. Analysis Of System Quality to Continuance Intention to Use (P-Value: 0.000)

Gen X is generally at a stage in life characterized by high financial and professional responsibilities. As a result, efficiency and control over respective finances, were greatly valued. This implied Gen X tended to be cautious about any obstacles or risks in digital services that could hinder respective usage. High transaction speeds (e.g., instant fund transfers, quick responses) provided immediate added value (Rodrigues et al., 2023; Santosa et al., 2021). In the behavior economics framework, time was a valuable resource, with rapid transactions reducing related costs for consumers. Gen X, busy with work and family, are inclined to use digital banking if the service saves time compared to conventional alternatives. Agile services met the need for efficiency, increasing the likelihood to consistently use digital banking apps. Consumer demand for instant, 24/7 banking services is extremely high, specifically among younger Gen X. Additionally, rapid services accommodated this demand, making customers feel more productive and in control of respective finances.

4.4.9. Moderating 1 (Income Level to Behavior Intention) (P-Value: 0.734)

A P-value greater than 0.05 showed that the digital literacy variable as a moderator had an insignificant effect on the relationship between income level and behavior intention. Higher income allowed access to digital banking services more easily. Although, the intention to switch to digital services was greatly influenced by convenience, security, or ease of managing finances, rather than simply the ability to use technology. From the perspective of Gen X (aged approximately 45–60 years), this age group is in a period of digital transition, experiencing the shift to digital technology during adulthood. Prior studies on digital banking adoption by Gen X, reported that

digital literacy moderated the influence of income on behavior intent (intent to use digital banking). This proved that high digital literacy strengthened the impact of income on adoption intent (Sabila & Hasnawati, 2024). However, empirical results showed that the moderation was insignificant. Digital literacy failed to alter the relationship between income level and the intention to use digital bank. Variations in digital literacy did not significantly alter the tendency for high-income individuals to be inclined to the use of digital bank than low-income earners.

4.4.10. Moderating 2 (Personal Innovativeness to Behaviour Intention) - (P-Value: 0.585)

The results showed that digital literacy failed to moderate the relationship between personal innovation and the intention to use digital banking. Innovative Gen X still intended to use digital banking, despite possessing low digital literacy. Intrinsic motivations such as curiosity drove behavior beyond rational considerations based solely on financial gain. This group derived satisfaction from new experiences, and do not want to miss out on digital trends, even though formal digital skills were limited, individual curiosity led to the willingness to try. As a result, limited digital literacy failed to hinder respective intention due to the strong exploratory drive. The main reason innovative Gen X remained confident in using digital bank is the trial-and-error or learning-by-doing method. Individuals with high personal innovation are more tolerant of trial-and-error, as well as not afraid to try and make mistakes during the learning process (Lin, Xie & Li, 2023; Narduzzo & Forrer, 2024). Similarly, the increasingly user-friendly design of digital banking application allowed those with low literacy to adapt independently through direct learning. Another crucial factor is social support from people around, such as children, co-workers, or peers. Gen X is in a unique social position, and this group often have children who are digital natives (Gen Z or millennials) as well as surrounded by colleagues that are more tech-savvy. Previous studies reported that this assistance had proven effective in bridging the digital literacy gap (Tran et al., 2020).

4.4.11. Moderating 3 (Personal Innovation to Use Behavior) - (P-Value: 0.001)

High levels of digital literacy variable reinforced the influence of personal innovation. This shows that innovative, tech-savvy Gen X are quicker to try out new features in digital banking services. The combination of high digital literacy and personal innovation enables the rapid adaptation to new features. Gen X with high digital literacy tends to process information on application more rapidly and efficiently (Budiman & Syafroni, 2023). Lower mental load makes it easier for this group to explore new menus and features without confusion. In addition, the lower mental load also increased self-efficacy, because people familiar with technology were more confident and less afraid of failure when trying new functions in banking application. The support of digital literacy enabled an innovative Gen X customer, to immediately try the bill payment automation or investment features in the application without much hesitation. This exploration process felt natural because the banking app interface tended to be consistent and intuitive, with previous technological habits reinforcing the effectiveness of personal innovation. Generally, Gen X with high digital literacy and an innovative nature quickly explored related banking features, and the comfortable feeling derived from using these services, eventually resulted in a routine habit.

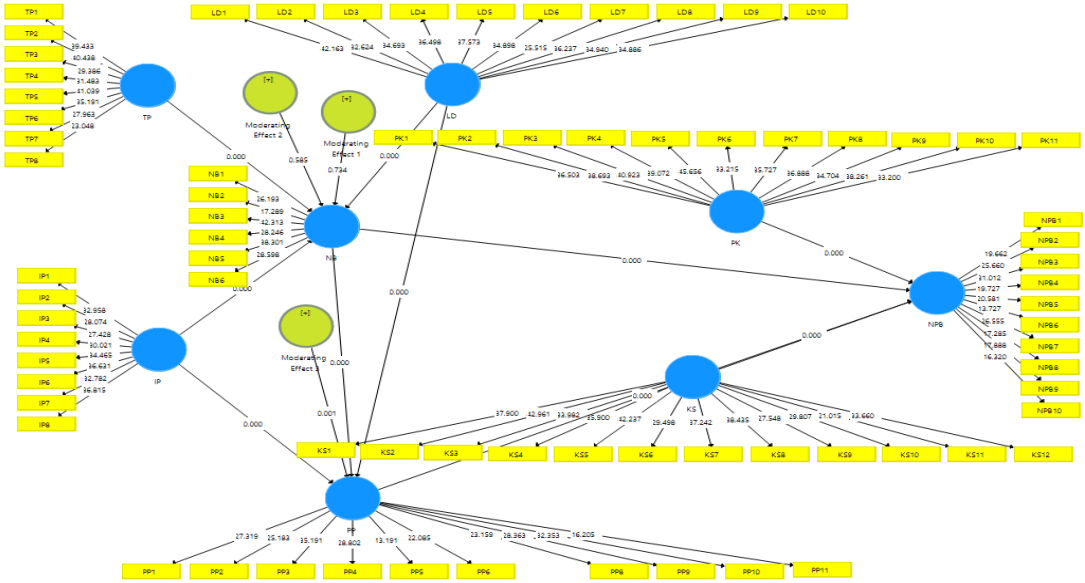

Figure 5: Bootstrapping Result for Gen X.

The following is a summary of the data processing results for Gen X, as in Table 9.

Table 9: Study Result Summary.

No.	Variable	Description
1	Income Level – Behavior Intention	Significantly influential
2	Personal Innovativeness– Behavioral Intention	Significantly in Fluential
3	Personal innovativeness – Use Behavior	Significantly influential
4	Behavioral Intention– Use Behavior	Significantly influential
5	Behavioral Intention – Continuance intention to use	Significantly influential
6	Use behavior – Continuance intention to use	Significantly influential
7	Perceived usefulness – Continuance intention to use	Significantly influential
8	System Quality – Continuance intention to use	Significantly influential
9	Income level – Behavior intention	Digital literacy does not strengthen
10	Personal innovativeness – Behavior intention	Digital literacy does not strengthen
11	Personal innovativeness – Use Behavior	Digital literacy strengthens (significantly)

The results clearly indicate that trust, perceived usefulness, and user satisfaction have a significant positive effect on continuance intention. Among these variables, trust emerges as the most influential factor, highlighting the importance of reliability and security in digital banking services for Generation X users.

5. CONCLUSIONS AND IMPLICATIONS

In conclusion, showed that digital literacy did not moderate-income levels in respect to behavior intention in X generations. Personal innovation and behavior intention were also not reinforced by digital literacy. The main result was that digital literacy enhanced personal innovation in use behavior, among both generations. Another significant result was that income level and personal innovation greatly influenced behavior intention. Personal innovation and behavior intention had a direct impact on use behavior. In addition, behavior intention, use behavior, and system quality influenced the continuance intention to use digital banking systems in both generations.

1. Theoretical implication

From a theoretical perspective, this research contributes to the existing body of knowledge on technology adoption and continuance behavior by extending models such as the UTAUT 3 and TCT within the context of digital banking. Specifically, the findings highlight the significant role of factors such as perceived usefulness, trust, and personal innovativeness in shaping continuance intention among Generation X users. Unlike younger generations, Gen x demonstrates a more cautious approach toward digital technologies. Therefore, this study emphasizes that continuance intention is not only driven by initial adoption factors but also by post-adoption experiences, including satisfaction

and perceived reliability. This enriches the literature by providing a more nuanced understanding of user behavior across generational cohorts.

2. From a managerial standpoint, the findings offer valuable insights for digital banking providers. Financial institutions should focus on enhancing the usability, security, and reliability of their digital platforms to maintain long-term engagement among Generation X users
3. From a policy perspective, regulators and stakeholders should support digital inclusion programs aimed at improving technological confidence among Generation X. This can be achieved through digital literacy campaigns, secure digital infrastructure, and consumer protection policies that enhance trust in digital financial services.
4. Future studies are encouraged to explore moderating variables such as age sub-groups within Generation X, income level, or digital experience to better understand heterogeneity within this cohort. Moreover, integrating additional constructs such as perceived risk, habit, or user experience could provide a more comprehensive model of continuance intention in digital banking contexts.

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