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Exploring Generation Z's Continuance Intention Toward Digital Banking in Malaysia: An Integrated Behavioral Reasoning and Expectation Confirmation Perspective

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Abstract

Digital banks in Malaysia have attracted millions of customers, but little is known about what keeps young users engaged after they open an account. This study aims to explore the continuance intention of Generation Z (Gen Z) digital banking users in Malaysia by integrating Digital Financial Literacy (DFL), Behavioral Reasoning Theory (BRT), and the Expectation Confirmation Model (ECM) into a single post-adoption framework. The model covers three types of explanation: reasons for and against adoption, post-adoption experience (perceived usefulness and satisfaction), and users' capability (DFL). Data were collected through an online survey of 355 university students aged 15–25 with prior digital banking experience and analysed using PLS-SEM. The results indicate that DFL has the strongest positive direct effect on continuance intention (β = 0.399), followed by satisfaction (β = 0.304) and reasons for adoption (β = 0.270), whereas perceived usefulness and reasons against adoption do not have significant direct effects. The study is an extension of BRT from adoption to post-adoption behavior and demonstrates that adoption reasons continue to be important after successful adoption, while adoption barriers are less of a factor. In practice, digital banks can enhance retention by improving the digital financial literacy of their users, ensuring consistent and satisfying service experiences, and reinforcing the everyday benefits of digital banking. Policymakers can help these efforts by incorporating digital financial literacy into the curricula of youth and higher education programs.

1. Introduction

As consumer expectations for speed, convenience, and anytime access continue to rise, digital banking has evolved from a supplementary banking channel into a primary platform through which consumers access financial services and manage their day-to-day financial activities (Koh et al., 2024). However, broad adoption does not ensure long-term usage. According to a recent longitudinal research on retail banking customers, retail banking customers' intent to change their behaviors does not always translate into actual action when change is fully digital (Bortne et al., 2026). The primary concern of digital banks is no longer to attract customers to their services but to retain them, and for some, the reasons for joining a service may be different from those for remaining.

This issue is particularly relevant in Malaysia, especially among young consumers. Bank Negara Malaysia introduced the concept of digital banks under Financial Sector Blueprint 2022-2026 as a new category of financial institutions, separate from conventional banks and digital payment providers (Bank Negara Malaysia, 2022). The number of customers in the five licensed digital banks reached over two million by the end of 2025 (Bank Negara Malaysia, 2026). The growth is centered around young Malaysians. Generation Z (Gen Z) (Dimock, 2019) represents around 7.7 million or 23% of the total Malaysian population, and over half of these Gen Z individuals would prefer to opt for digital-first payment methods during their daily transactional needs (Chua, 2025). This generation, who have grown up with smartphones, is one of the segments targeted by the “digital” banks in Malaysia (Hoo et al., 2024). But many young Malaysians are students who have low income and limited banking experience. And they are able to switch between banking apps at very little cost. Thus, the number of customers

alone does not indicate whether they will continue using digital banks after the novelty of adoption has diminished.

There are two partial explanations from existing research as to why users remain. The first is based on the concept of Behavioral Reasoning Theory (BRT) and Innovation Resistance Theory, which states that there are two sets of reasons for adoption and resistance to an innovation that can coexist (Westaby, 2005; Bhatnagr et al., 2024). Thus, benefits like relative advantage, convenience and social influence can be present beside the usage, risk, tradition and image barriers in the evaluation of a service (Baklouti & Boukamcha, 2024), and this perspective has been recently extended from mobile banking adoption to mobile banking continuance (Nuramalina et al., 2025). The second is based on the Expectation Confirmation Model (ECM), which posits that continued use results from satisfaction and perceived usefulness developed through users' post-adoption experiences and the comparison of those experiences with prior expectations (Bhattacherjee, 2001; Nguyen & Dao, 2024). However, evidence on perceived usefulness is not consistent, even in Malaysia (Abdul-Halim et al., 2022), and resistance is not addressed by ECM. The single view, whether it is the perspective from the public or from the government, illuminates only a single aspect of the continuance decision.

Both perspectives, however, overlook users' capabilities to use digital banking confidently and effectively. Digital financial literacy has been found to influence the intention to use digital banks (Lee et al., 2026) and sustain the engagement of mobile financial services (Tetteh & Kwateng, 2026) in the context of the Philippines' adoption of digital banking. This is especially important for young users. While comfortable with technology, Gen Z does not mean a person is competent in evaluating fees, managing risks and making good financial decisions via app.

Taken together, these streams of literature reveal an important research gap. Existing research on Malaysian continuance has primarily been conducted on e-wallets and merchant payments, not licensed digital banks, and research on Malaysian Gen Z has tended to focus on whether or not they intend to adopt digital banks, rather than whether or not they continue to use them (Abdul-Halim et al., 2022; Tan et al., 2024). This is the first study to examine simultaneously multiple reasons for and against adoption, as well as perceived usefulness, satisfaction, and digital financial literacy among young users of licensed digital banks in Malaysia. If there is no such evidence, then digital banks and policy makers may be designing retention strategies based on data from the early stages of adoption, which may not be relevant to the later stages.

This study addresses this gap by proposing and empirically validating an integrated model of continuance intention among Gen Z users of licensed digital banks in Malaysia. The model brings together the cause-effect thinking of BRT, the experience-oriented thinking of ECM and the capability-oriented thinking of digital financial literacy. Hence, the study aims at achieving the following objectives:

RO1: To examine the effects of Reasons for Adoption (RFA) and Reasons Against Adoption (RAA) on the Continuance Intention (CI) of Gen Z digital banking users in Malaysia.

RO2: To assess the effects of Perceived Usefulness (PU) and Satisfaction (SAT) on the Continuance Intention (CI) of Gen Z digital banking users in Malaysia.

RO3: To evaluate the effect of Digital Financial Literacy (DFL) on the Continuance Intention (CI) of Gen Z digital banking users in Malaysia.

By achieving these objectives, the study makes three contributions. First, it shows that, even after gaining experience with a licensed digital bank, reasons for and against adoption may remain relevant to users' continuance decisions. Second, it integrates BRT's reason-based perspective with ECM's experience-based perspective and incorporates digital financial literacy as a capability-based factor. Third, it provides evidence on Gen Z users of Malaysia's newly licensed digital banks, a context that has received less attention than e-wallets and traditional mobile banking. This evidence is used to inform practice and policy recommendations for keeping young customers.

The following sections of the paper are organized as follows. Section 2 reviews the literature and identifies the research gaps. The hypotheses and research model are developed in Section 3. The methodology is described in Section 4, including dealing with common method bias, and in Section 5 the results are presented. The findings are discussed in section 6, followed by a conclusion in section 7, policy implications in section 8 and limitations and directions for future research in section 9.

2. Literature Review

2.1 Digital Banking, Young Malaysians and the Malaysian Context

Digital banking is the delivery of banking services to customers through digital channels, which allows them to conduct banking transactions without visiting the branch to access financial products and services. Previously, digital banking was seen as another channel to provide financial products and services, but now, it is emerging as an important way to engage consumers with financial services, particularly by providing convenience, speed and accessibility (Koh et al., 2024). Traditional research, however, has equated digital banking adoption with the use of internet channels provided by traditional banks, and failed to account for the unique nature of fully digital, branchless banking models (Lee & Kim, 2020).

When studying digital banking continuance, the study environment, Malaysia, should be taken into account. Bank Negara Malaysia introduced in the Financial Sector Blueprint 2022-2026 a new concept of licensed digital banks as a new entity in the financial landscape other than conventional banking and digital payment services, Bank Negara Malaysia (2022). Initial acceptance, as well as usage, is important to these banks, as they were quickly adopted (Bank Negara Malaysia, 2026). However, the studies done in Malaysia have only focused on the adoption intention (Hoo et al., 2024; Rashid et al., 2023) and limited

studies have focused on the post-adoption behavior of those who have adopted the use of licensed digital banks.

In this context, youth make up a unique and crucial group in Malaysia. About 23% of the population are youth, defined by the government as 15 to 30 years old under Youth Societies and Youth Development (Amendment) Act 2019, and Gen Z makes up the bulk of the youth. Research suggests that the relative advantage and social influence determines acceptance of digital banks among Malaysian Gen Z users (Hoo et al., 2024), and industry evidence suggests that more than half of the Malaysian Gen Z prefers to pay with a digital-first method instead of traditional banks in their day-to-day life and nearly half of them makes purchase using social media advertisements in direct (Chua, 2025). Meanwhile, a number of young Malaysians are students and rely on allowances, scholarships or part-time work, and it is only for a relatively short period that they have a banking history. These traits imply that the propensities that make young Malaysians stick with digital financial institutions and the capabilities they possess to use them effectively may be different from those of older customers. To date, however, studies about young users in Malaysia have focused on their adoption intention instead of their sustained usage.

2.2 From Adoption to Continuance Behavior

The research of the technology acceptance has always been on the question of why people accept new technologies. The Technology Acceptance Model (TAM) (Davis, 1989) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) account for the initial acceptance in terms of beliefs on usefulness, ease of use and social influence. Adoption does not necessarily mean that the use will continue. The key factors for long-term success of an information system is continuance as it is based on users' experience of the information system (Bhattacherjee, 2001).

Following study reveals that the differences between continuance and adoption is that users build up more experience, satisfaction and habits of use (Limayem et al., 2007). Nevertheless, from the results of the meta-analysis, it is important to recognize that the factors that impact continuance intention may vary depending on the context and do not necessarily need to be based on adoption models (Franque et al., 2021). Theoretical frameworks that incorporate pre-adoption motivations and post-adoption assessments are therefore important to grasp digital banking continuance.

2.3 Theoretical Foundations

2.3.1 Behavioral Reasoning Theory and Innovation Resistance

In the field of decision making, Behavioral Reasoning Theory (BRT) is a theory that differentiates between reasons for and reasons against a behavior, (Westaby, 2005). BRT is not based on attitudes, however, where positive or negative arguments are taken as exclusive. Unlike existing attitude models,

BRT does not assume that people hold a positive or a negative attitude to an innovation, or have a positive or a negative argument, respectively.

This is supported by the idea of Innovation resistance theory. Ram and Sheth (1989) isolated the factors that inhibit consumers from accepting innovations and some follow-up studies indicate that the resistance factors are factors which block consumers from avoiding the technology, other than their beliefs about the acceptance of the innovation (Claudy et al., 2015; Gupta and Arora, 2017). BRT has been used to model both enabling and inhibiting factors in the context of mobile payment adoption and digital banking adoption (Sivathanu, 2019; Bhatnagr et al., 2024) in digital finance. In the recent literature, the role of resistance on post adoptions of BRT-based banking is suggested (Nuramalina et al., 2025) but most of the studies on BRT-based banking are related to adoption. One question yet to be resolved is if resistance related beliefs still remain after the adoption of digital banking.

2.3.2 Expectation Confirmation Model

As far as technology continuance is concerned, the Expectation Confirmation Model (ECM) is the most popular one used to account for the phenomenon (Bhattacherjee, 2001). The expectation-confirmation theory (Oliver, 1980) is used as the basis to explain the relationship between ECM and user's comparison of experience and expectations, and how confirmation leads to increased perceived usefulness and satisfaction, which further leads to increased continuance intention. ECM has been extensively applied in the mobile and digital financial services domain, and research consistently shows that customer satisfaction is a crucial determinant of customer retention (Susanto et al., 2016; Poromatikul et al., 2020; Nguyen & Dao, 2024). However, the large majority of responses to ECM are based on the post-experience assessment, and do not capture impervious resistance elements that can influence the ongoing use of digital banking.

2.3.3 Integrating BRT and ECM

BRT and ECM are complementary explanations on continuance. BRT reveals the justifications consumers may give to justify their usage or non-usage of digital banking, while ECM paints a picture of how their experience of digital banking changes their perspective on the bank, based on confirmation, usefulness and satisfaction. Upon both two are combined, it introduces both a decision-based and an experience-based mechanism. The third, capability-based, dimension of understanding digital financial services users is digital financial literacy, which highlights the capabilities of users and how these capabilities can be used with DFS.

2.4 Reasons for Adoption

BRT said that the reasons for adoption refer to specific justifications to motive people to adopt an innovation (Westaby, 2005). Relative advantage, social influence and convenience are three important

factors that enable digital banking. In line with the above, relative advantage is defined as the perceived advantage that an innovation offers over existing alternatives (Rogers, 2003) and has been demonstrated to encourage digital bank adoption, as it is seen as more accessible, cheaper and faster than existing options, and there is evidence to support this within Malaysia (Hoo et al., 2024). Social influence is characterized in terms of the extent to which people feel an urge to learn a technology as a result of the influence of other people (Venkatesh et al., 2003), and this is consistent with Malaysian studies on the influence on digital banking adoption intention (Rashid et al., 2023). Convenience is just exactly the convenience of executing monetary activities, and additionally it is a crucial factor in selecting an online-only bank (Lee & Kim, 2020). The extent to which these reasons for adoption are still applicable after the adoption has been made is unknown.

2.5 Reasons Against Adoption: Innovation Resistance

Users' concerns and barriers to digital banking are called resistance factors. The barriers are called traditional, risk, image and usage barriers in the innovation resistance theory (Ram & Sheth, 1989). Some of the traditional barriers include the need for human interaction and service of branches (Laukkanen, 2016). Security, privacy and financial concerns are risk barriers and some of the most critical ones to the implementation of electronic financial services (Featherman & Pavlou, 2003; Aboobucker & Bao, 2018). The image barriers are the issues that hinder the acceptance of digital innovations by the users and the usage barriers are related with the ease of technology usage in everyday life and the complexity of the technology (Kaur et al., 2020).

Whether these will exist after the adoption is theoretically in doubt. Other studies noted that there was a decrease in resistance after repeated exposure (Kaur et al., 2020); however, other studies revealed that risk-based resistance and habitual resistance were not impacted on with the use of digital finance (Lee & Yoon, 2026; Nuramalina et al., 2025). This disconnect further highlights the need to examine resistance in the post-adoption context.

2.6 Perceived Usefulness and Satisfaction

The perceived usefulness of a system comes from the perceived "value added" to the user's work by using the system (Davis, 1989). In ECM, usefulness is placed in the context of actual use, and influences continuance decisions (Bhattacherjee, 2001). Although adoption research has supported it, its effect on continuance is in question as a result of Malaysian research on those who have used digital payment platforms, which showed that while usefulness may directly impact the continuance of use, it may also have an indirect effect via attitude or satisfaction (Abdul-Halim et al., 2022).

According to Oliver (1980) satisfaction is users' overall assessment of a service, which is founded on a comparison of expectation and experience. Literature indicates that satisfaction is the most significant and immediate influence on the continuance intention, and the result of the studies on both information systems and mobile banking shows that satisfaction and continuance intention are positively influenced

(Nguyen & Dao, 2024; Franque et al., 2021; Susanto et al., 2016). So satisfaction is likely to be a significant link between digital banking experiences and usage.

2.7 Digital Financial Literacy

Digital financial literacy (DFL) is a concept that goes beyond traditional financial literacy and adds knowledge and skills of how to use digital financial services effectively and safely (Lusardi & Mitchell, 2014; Tony & Desai, 2020). DFL offers tools for users to evaluate the digital financial products they use, and mitigate technology-related risks and enhance the benefits they derive from digital platforms. Previous studies have correlated DFL with usage of digital payments and financial wellbeing and financial decision making (Lo Prete, 2022; Choung et al., 2023). If customers became more literate, they would likely feel more confident about using digital banking, feel less risk when using it, and have greater value of the service. Evidence of a direct link between DFL and digital banking continuance, however, is still sparse, especially in new digital banking markets.

2.8 Continuance Intention

Continuance intention is the user's intention to continue using a system after his first use of the system (Bhattacherjee, 2001). It's important to service providers because the expense of acquiring customers is only experienced over time. With digital banking, where switching costs are minimal and other products are just a download away, retention has little to do with the number of banks that are "on board" and much more to do with whether or not the customer remains engaged. The literature review shows that the antecedents can be classified into experience-based evaluations (satisfaction, perceived usefulness) (Bhattacherjee, 2001; Nguyen & Dao, 2024), enabling/inhibiting reasons (Nuramalina et al., 2025), habit (Limayem et al., 2007) and user competencies (digital financial literacy) (Tetteh & Kwateng, 2026). Most of these antecedents have been examined separately across various theoretical traditions with few studies conducted together.

2.9 Research Gap and Critical Evaluation

Based on this review, three gaps are identified. First, the BRT and innovation resistance research has been mainly on the adoption. The intentions to continue with the adoption of licensed digital banks have not been extensively tested with reasons for and against adoption for Malaysian licensed digital banks; conversely, Malaysian study on continuance have focused on e-wallets and merchant payments (Abdul-Halim et al., 2022; Tan et al., 2024). Second, perceived usefulness in ECM is found to be inconsistent even within Malaysia (Abdul-Halim et al., 2022), and there is no resistance in ECM. Third, DFL has been associated with the intention of adoption in other settings (Lee et al., 2026) and with continued engagement in other settings (Tetteh & Kwateng, 2026), but it has never been studied with reason-based and experience-based antecedents in the same continuance model. Young users are under-represented

in all three gaps: Malaysian studies of Gen Z have focused on the why of their adoption of digital banks, but not why they continue to use them. Accordingly, this study combines the three models into a single explanatory model to explain the continuance intention of Gen Z digital banking users in Malaysia.

2.10 Research Questions

The literature review shows a considerable gap of theories and contexts in understanding the reasons behind the persistence of young users to use digital banking after initial adoption in Malaysia. Previous studies have mainly focused on users' intention to adopt digital banks, or on continuance of e-wallets and merchant payments. They have not captured reasons for and against adoption, as well as post-adoption journey, and digital financial literacy in a single continuance model for Generation Z customers of licensed digital banks. To help meet these needs, the following research questions were developed for this study:

RQ1: How do Reasons for Adoption and Reasons Against Adoption influence Gen Z users' Continuance Intention toward digital banking in Malaysia?

RQ2: How do Perceived Usefulness and Satisfaction influence Gen Z users' Continuance Intention toward digital banking in Malaysia?

RQ3: How does Digital Financial Literacy influence Gen Z users' Continuance Intention toward digital banking in Malaysia?

3. Research Model and Hypotheses Development

3.1 Reasons for Adoption and Continuance Intention

According to BRT, the reasons for a behavior are ones that support and enhance the intention to engage in the behavior (Westaby, 2005). These reasons on digital banking are: Relative advantage, Social influence and perceived convenience. It is likely that these will persist post-adoption as they will be provided to the user's every time they use the service (Rogers, 2003; Lee & Kim, 2020). In the past, BRT based reasons for use have been able to predict intention of digital payment (Sivathanu, 2019) and in Malaysia, relative advantage and social influence have been able to predict intention toward digital banks (Hoo et al., 2024; Rashid et al., 2023). Hence:

H1: Reasons for Adoption (RFA) positively influence users' Continuance Intention (CI) toward digital banking services.

3.2 Perceived Usefulness and Continuance Intention

ECM states that perceived usefulness is a direct cause of continuance intention (Davis, 1989; Bhattacherjee, 2001) which is defined as the intention of using systems that users believe will improve their performance. It has been validated in context of mobile banking (Susanto et al., 2016; Nguyen & Dao, 2024) and validated by the meta-analysis (Franque et al., 2021). However, the results in Malaysia are not consistent (Abdul-Halim et al., 2022) and this could be a valid reason to retest the relationship. Thus:

H2: Perceived Usefulness (PU) positively influences users' Continuance Intention (CI) toward digital banking services.

3.3 Satisfaction and Continuance Intention

Satisfaction is the most direct indicator of ECM continuance intention, as it is the affective assessments of the user of the service in the most immediate way (Oliver, 1980; Bhattacherjee, 2001). It is one of the most predictive factors of continuance for information systems (IS), such as mobile banking and mobile financial services (MFS) (Nguyen & Dao, 2024; Rizvee et al., 2025; Nuramalina et al., 2025). Accordingly:

H3: Satisfaction (SAT) positively influences users' Continuance Intention (CI) toward digital banking services.

3.4 Reasons Against Adoption and Continuance Intention

BRT views the reasons against a behavior as a separate entity that inhibits intention (Westaby, 2005; Claudy et al., 2015). The reasons are traditional banks, risk barrier, image and usage barrier in digital banking (Ram & Sheth, 1989; Kaur et al., 2020). These barriers can also endure post-adoption: innovation resistance has been observed to negatively affect mobile banking continuance (Nuramalina et al., 2025); habitual resistance and risk-based resistance remain as it develops the digital finance (Lee & Yoon, 2026). Therefore:

H4: Reasons Against Adoption (RAA) negatively influence users' Continuance Intention (CI) toward digital banking services.

3.5 Digital Financial Literacy and Continuance Intention

Through the integration of financial skills and digital literacy, DFL can help to ensure safe use of online financial services (Tony & Desai, 2020; Lo Prete, 2022). As the usage of DFL increases, higher DFL users can make more informed risk assessments and make more value from digital banking, which drives up confidence levels. DFL has been proven to be effective for the attractiveness of mobile financial services (Tetteh & Kwateng, 2026) and intention to use digital banking in Malaysia (Lee et al., 2026). Hence:

H5: Digital Financial Literacy (DFL) positively influences users' Continuance Intention (CI) toward digital banking services.

3.6 Research Model

The research model is shown in figure 1. Reasons for Adoption and Reasons against Adoption are identified as second order constructs that are inspired by the BRT and innovation resistance literature. The experience-based mechanisms of ECM are Perceived Usefulness and Satisfaction, while Digital Financial Literacy is users' ability to interact with digital financial services. The five constructs are presumed to directly impact Continuance Intention.

4. Methodology

4.1 Research Design, Population and Sampling

This study adopts a quantitative, cross-sectional survey design suitable for examining the hypothesized relationships among latent constructs using structural equation modelling (Hair et al., 2019).

4.1.1 Population

The target population consisted of Malaysian Gen Z users of digital banking services, born between 1997 and 2012 (Dimock, 2019) who had opened and used a digital banking account. There is no sampling frame of this population since digital banks do not publish lists of their customers. The accessible population therefore consisted of students enrolled in Malaysian higher education institutions who had experience using digital banking services.

4.1.2 Rationale for Selecting Young Digital Banking Users Aged 15–25

The study was based on young people aged 15–25 years for four reasons. Firstly, this age range is completely included within Gen Z, as well as in the official definition of youth under the Youth Societies and Youth Development (Amendment) Act 2019, which is 15–30 years. Secondly, Gen Z is the most digitally-minded consumer segment in Malaysia, with over half preferring digitally-first payment methods (Chua, 2025), and they have been identified as a key target group for Malaysia's digital banks (Hoo et al., 2024). Thirdly, in this age group, youth are beginning their financial journeys and developing the banking habits they are likely to sustain for many years, making their banking habits critical for the long-term success of digital banks. Fourth, most of them are from a low-income group and lack financial literacy, making it an appropriate group to study the impact of digital financial literacy on sustaining digital banking usage over financial resources. Additionally, a focus on students in this age band resulted in a relatively homogeneous sample of a life stage and income, minimizing the impact of extraneous factors such as occupation on the relationships being tested.

4.1.3 Sample and sampling

A non-probability purposive sampling technique was adopted because respondents were required to have prior digital banking experience. Eligibility was verified by a screening question at the beginning of the questionnaire (see section 4.2). G*Power 3.1 (Faul et al., 2009) was used to calculate the minimum sample size. With five predictors, a medium effect size ($f^2 = 0.15$), a power of 0.95 and an alpha of 0.05, a minimum of 138 respondents were needed. The total sample of 355 respondents is well over the minimum required, and corresponds to the sample size recommendations for PLS-SEM (Hair et al., 2019).

4.2 Data Collection and Measurement Instrument

The data was gathered by using a structured and self-administered online questionnaire that was created in Google Forms. The survey link was sent via email, WhatsApp and social media, as these media are deemed suitable for this digitally savvy population. The survey was conducted with respondents who had digital banking experience in order to include only those with digital banking experience. All respondents were asked to participate in this study and were told about the purpose of the study before they gave consent to participate; participation was voluntary and anonymous.

There were two parts to the questionnaire. The first set of demographics and banking digital usage profiles. The second quantified the study constructs by using the 45 items adapted from the previously validated scales and slightly re-worded to suit the context of digital banking and maintain its meaning. Reasons for Adoption (RFA) and Reasons Against Adoption (RAA) constructs were operationalized using constructs from the behavioral reasons and innovation resistance literature, and included relative advantage, perceived convenience and social influence as RFA, and risk, traditional, image and usage barriers as RAA. Items for perceived usefulness were adapted from the expectation-confirmation research, the expectation-confirmation literature were used for satisfaction and continuance intention, and the items of digital financial literacy were adapted from existing financial literacy instruments. All items were rated on a 5 point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

4.3 Sample Characteristics

The respondents (N = 355) were presented in demographic profile as shown in Table 1. The majority of the respondents were females (n = 237, 66.8%) with males making up the remaining 33.2% (n = 118). The age group of the respondents was not represented outside of the 15–25 age group with 100% saying they were in an educational setting at the time of the survey. Most respondents (93.5%, n = 332) reported a monthly income of RM1,000–RM1,999, a smaller proportion earned RM2,000–RM4,999 (5.6%, n = 20), and very few reported RM5,000–RM9,999 (0.3%, n = 1) or RM10,000 and above (0.6%, n = 2). This is a normal income pattern of the students who generally receive income from allowances, scholarships or part-time work.

Table 1
Demographic profile of the respondents (N = 355)

Variable	Category	Frequency	Percent (%)	Cumulative (%)
Gender	Male	118	33.2	33.2
	Female	237	66.8	100.0
Age group	15–25 years	355	100.0	100.0
Monthly income	RM1,000–RM1,999	332	93.5	93.5
	RM2,000–RM4,999	20	5.6	99.2
	RM5,000–RM9,999	1	0.3	99.5
	RM10,000 and above	2	0.6	100.0
Current position	Student	355	100.0	100.0

4.4 Data Analysis Procedure

The data were analyzed by using the Partial Least Squares Structural Equation Modelling (PLS-SEM) method using SmartPLS 4 (Ringle et al., 2024). The PLS-SEM was used in this study because it is suitable for prediction-oriented studies, can handle higher-order constructs, and does not require multivariate normality (Hair et al., 2019). A two-step approach (Gefen et al., 2000) was followed in which the measurement model was first evaluated. To assess the reliability, internal consistency was tested using Cronbach's alpha and composite reliability (CR) (Henseler et al., 2015), to assess the validity the convergent validity was tested using outer loadings and average variance extracted (AVE) (Henseler et al., 2015), and to assess discriminant validity heterotrait–monotrait ratio (HTMT) (Henseler et al., 2015) and Fornell–Larcker criterion (Fornell & Larcker, 1981). Then, the structural model was evaluated through the analysis of collinearity, path coefficients, coefficient of determination (R^2), effect size (f^2) and prediction relevance (Q^2). Bootstrapping (with 5,000 resamples) was used to test the significance of the hypothesized paths.

4.5 Common Method Bias

Common method bias was assessed using Harman’s single-factor test, as presented in Table 2. The first factor accounted for 48.561% of the total variance, which is below the recommended threshold of 50%. This indicates that no single factor accounts for the majority of the variance in the data (Podsakoff et al., 2003; Kock, 2015). Therefore, common method bias is not considered a significant concern in this study, supporting the suitability of the data for subsequent measurement and structural model analyses.

Table 2
Harman’s Single-Factor Test for Common Method Bias

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.342	48.561	48.561	5.342	48.561	48.561
2	2.592	23.561	72.122			
3	.756	6.869	78.992			
4	.571	5.191	84.183			
5	.413	3.753	87.936			
6	.288	2.620	90.556			
7	.256	2.324	92.880			
8	.232	2.105	94.985			
9	.224	2.032	97.017			
10	.186	1.693	98.710			
11	.142	1.290	100.000			

5. Results

5.1 Measurement Model: First-Order Constructs

The items loadings, Cronbach's alpha (α) and the composite reliability (CR) and AVE for all first order constructs are reported in Table 3. After the Hair et al. (2019) guidelines, the loadings should be greater than 0.70, the α greater than 0.70 and the AVE greater than 0.50.

Table 3
Factor loadings, reliability and convergent validity of first-order constructs

Second-order construct	First-order construct	Item	Loading (λ)	α	CR	AVE
Reasons for Adoption	Relative Advantage	RA1	0.794	0.876	0.910	0.670
		RA2	0.830			
		RA3	0.855			
		RA4	0.778			
		RA5	0.833			
	Social Influence	SI1	0.821	0.820	0.881	0.650
		SI2	0.753			
		SI3	0.808			
		SI4	0.840			
	Perceived Convenience	PC1	0.862	0.801	0.883	0.715
		PC2	0.825			
		PC3	0.850			
Reasons Against Adoption	Traditional Barrier	TB1	0.839	0.790	0.876	0.703
		TB2	0.789			
		TB3	0.884			
	Risk Barrier	RB1	0.832	0.885	0.921	0.744
		RB2	0.892			
		RB3	0.874			
		RB4	0.851			
	Image Barrier	IB1	0.897	0.936	0.954	0.839
		IB2	0.928			
		IB3	0.920			
		IB4	0.918			
	Usage Barrier	UB1	0.925	0.949	0.963	0.867
		UB2	0.943			

Second-order construct	First-order construct	Item	Loading (λ)	α	CR	AVE
		UB3	0.934			
		UB4	0.923			
–	Perceived Usefulness	PU1	0.857	0.895	0.923	0.705
		PU2	0.853			
		PU3	0.833			
		PU4	0.799			
		PU5	0.856			
–	Satisfaction	SA1	0.881	0.874	0.923	0.799
		SA2	0.897			
		SA3	0.904			
–	Digital Financial Literacy	DFL1	0.811	0.880	0.913	0.676
		DFL2	0.835			
		DFL3	0.852			
		DFL4	0.764			
		DFL5	0.846			
–	Continuance Intention	CI1	0.837	0.894	0.922	0.702
		CI2	0.853			
		CI3	0.851			
		CI4	0.830			
		CI5	0.818			

The item loadings of all items were above the 0.70 cut-off (range 0.753 to 0.943) and no items were deleted. In the results, the Cronbach's α value ranged from 0.790 to 0.949 and the composite reliability value was between 0.876 and 0.963, showing good internal consistency. AVE values were between 0.650 and 0.867, which shows that each construct accounts for more than half of the variance in its indicators. Within Reasons for Adoption, Relative Advantage (α = 0.876, CR = 0.910, AVE = 0.670), Social Influence (α = 0.820, CR = 0.881, AVE = 0.650) and Perceived Convenience (α = 0.801, CR = 0.883, AVE = 0.715) met all criteria. Within Reasons Against Adoption, Traditional Barrier (α = 0.790, CR = 0.876, AVE = 0.703), Risk Barrier (α = 0.885, CR = 0.921, AVE = 0.744), Image Barrier (α = 0.936, CR = 0.954, AVE = 0.839) and Usage Barrier (α = 0.949, CR = 0.963, AVE = 0.867) likewise performed well. Perceived Usefulness (α = 0.895, CR

= 0.923, AVE = 0.705), Satisfaction (α = 0.874, CR = 0.923, AVE = 0.799), Digital Financial Literacy (α = 0.880, CR = 0.913, AVE = 0.676) and Continuance Intention (α = 0.894, CR = 0.922, AVE = 0.702) also satisfied all thresholds. This measurement model thus demonstrates acceptable internal consistency reliability and construct validity.

5.2 Measurement Model: Second-Order Constructs

Table 4 shows the reliabilities and convergent validity of the two second-order constructs. Reasons for Adoption encompassed three dimensions, and exhibited satisfactory internal consistency (α = 0.928; CR = 0.939) and good convergent validity (AVE = 0.560). The reasons against adoption (Traditional, Risk, Image, and Usage Barriers) also had relatively high results, respectively (α = 0.942; CR = 0.950; AVE = 0.570). Both constructs were determined to satisfy all the criteria recommended and can be considered second order constructs.

Table 4
Reliability and convergent validity of second-order constructs

Second-order construct	First-order constructs	α	CR	AVE
Reasons for Adoption (RFA)	Relative Advantage; Social Influence; Perceived Convenience	0.928	0.939	0.560
Reasons Against Adoption (RAA)	Traditional Barrier; Risk Barrier; Image Barrier; Usage Barrier	0.942	0.950	0.570

5.3 Discriminant Validity: HTMT

The values of the HTMT ratios are as detailed in Table 5, between 0.174 (RAA–SAT) and 0.911 (PU–RFA). All pairs (except one) were below the 0.90 threshold for conceptually similar constructs recommended by Henseler et al. (2015) and Hair et al. (2019). The level was just slightly higher than the theoretical level in both relative advantage dimensions (RFA and PU), which are measures of the belief in performance advantage of digital banking. The slightly higher results for CI–DFL (0.880), CI–SAT (0.850) and DFL–SAT (0.850) also show the close theoretical relationship between these two methods, and are within the accepted range. Overall the results show good discriminant validity.

Table 5
Heterotrait–monotrait ratio (HTMT)

Construct	CI	DFL	PU	RAA	RFA	SAT
CI						
DFL	0.880					
PU	0.675	0.716				
RAA	0.191	0.201	0.201			
RFA	0.756	0.755	0.911	0.246		
SAT	0.850	0.850	0.681	0.174	0.715	

5.4 Discriminant Validity: Fornell–Larcker Criterion

The Fornell–Larcker criterion for the diagonal elements in bold is the square root of each construct's AVE, which should be higher than the square root of the construct correlation between these constructs, as shown in Table 6. The diagonal values were from 0.748 (RFA) to 0.894 (SAT), and were all higher than the corresponding inter construct correlation except for RFA and PU (0.831) which was higher than the square root of the AVE of RFA (0.748) but lower than the AVE of PU (0.840). This indicates that there is a high level of common variance both between perceived usefulness and the construct of reasons-for-adoption and was supported by the result of HTMT. However, there are some commonalities between relative advantage and perceived usefulness: Beliefs about the performance benefits of digital banking make this overlap theoretically possible. The overall results basically aligned with the Fornell–Larcker results, with the relation between the PU and RFA being considered when interpreting the structural results.

Table 6
Fornell–Larcker criterion

Construct	CI	DFL	PU	RAA	RFA	SAT
CI	0.838					
DFL	0.783	0.822				
PU	0.605	0.636	0.840			
RAA	0.095	0.090	0.091	0.755		
RFA	0.690	0.683	0.831	0.168	0.748	
SAT	0.753	0.777	0.602	0.110	0.644	0.894

5.5 Structural Model Assessment and Hypothesis Testing

Before testing of the hypotheses, factors of collinearity and explanatory power/effect sizes were studied in the structural model (Table 7). The inner-model variance inflation factor (VIF) values of the five

predictors of the Continuous Intention ranged from 1.039 (RAA) to 3.876 (RFA). Collinearity was not a problem for the path estimates, as all were less than the 5 level cut-off (Hair et al., 2019). The VIF values for Reasons for Adoption (3.876) and Perceived Usefulness (3.372) were above the more conservative value of 3, though. This is the same in common variance that was found in the assessment of discriminant validity, and it should be taken into account when interpreting the effects of these two constructs.

The model accounts for the variance in the measure of Continue Intention ($R^2 = 0.693$; adjusted R2 = 0.689). It is medium explanatory power (Hair et al., 2019) that is close to the substantial level (0.75).

According to Cohen, the medium effect on Continuance Intention ($f^2 = 0.174$) was found in the Digital Financial Literacy. Satisfaction ($f^2 = 0.111$) and Reasons for Adoption ($f^2 = 0.061$) had a small effect. Perceived Usefulness ($f^2 = 0.003$) and Reasons Against Adoption ($f^2 = 0.001$) did not have a significant effect ($f < 0.02$). The ranking is comparable to the path coefficients, and also suggests that the Digital Financial Literacy variable has the greatest influence on the model.

Table 7
Collinearity, effect sizes and explanatory power for Continuance Intention

Predictor → CI	**Inner VIF**	**f^2**	**Effect size**
Digital Financial Literacy	2.974	0.174	Medium
Satisfaction	2.700	0.111	Small
Reasons for Adoption	3.876	0.061	Small
Perceived Usefulness	3.372	0.003	None
Reasons Against Adoption	1.039	0.001	None

The results of the hypothesis testing are shown in Table 8. Three of the five hypotheses were supported. Digital Financial Literacy had the strongest positive effect on Continuance Intention ($\beta = 0.399$, $t = 5.035$, $p < 0.001$), followed by Satisfaction ($\beta = 0.304$, $t = 3.987$, $p < 0.001$) and Reasons for Adoption ($\beta = 0.270$, $t = 3.410$, $p = 0.001$). In contrast, Perceived Usefulness ($\beta = -0.055$, $t = 0.759$, $p = 0.448$) and Reasons Against Adoption ($\beta = -0.014$, $t = 0.521$, $p = 0.603$) had no significant effect. Then, H1, H3, and H5 were supported and H2 and H4 were not.

Table 8
Results of hypothesis testing

Hypothesis	Path	β	SD	t-statistic	p-value	Decision
H1	RFA → CI	0.270	0.079	3.410	0.001	Supported
H2	PU → CI	−0.055	0.072	0.759	0.448	Not supported
H3	SAT → CI	0.304	0.076	3.987	0.000	Supported
H4	RAA → CI	−0.014	0.028	0.521	0.603	Not supported
H5	DFL → CI	0.399	0.079	5.035	0.000	Supported

Note: β = path coefficient (original sample); SD = standard deviation; bootstrapping with 5,000 resamples. Source: Authors' own creation.

6. Discussion

This study utilizes BRT, ECM and digital financial literacy to explore the reasons for the continued use of digital banking by Gen Z users in Malaysia. The findings indicate that capability (digital financial literacy) and experience (satisfaction) and positive reasoning (reasons for adoption) are direct predictors of young users' continuance intention, while perceived usefulness and reasons against adoption do not directly affect users' continuance intention. Each finding is explained in the context of the characteristics of Gen Z users in the following subsections.

6.1 Reasons for Adoption and Continuance Intention (H1)

The stronger young users' reasons for using digital banking, the stronger their intention to continue (H1 was supported: β = 0.270, t = 3.410, p = 0.001): the stronger reasons young users gave for using digital banking, the stronger their intention to continue was. This fits into BRT's main tenet that reasons for a behavior are justifications that strengthen intention (Westaby, 2005). Most of the motives that encourage young people to adopt also apply to their use of the product, such as convenience, relative advantage, and social influence. It is consistent with the findings of Hidayat-ur-Rehman et al. (2021) that users value digital financial services as they are more beneficial and convenient compared to traditional financial services. It also builds on the work of Hoo et al. (2024) who reported that relative advantage and social influence determine the intention to accept digital banks among Malaysian Gen Z. It is found in the present results that these reasons do not disappear after adoption. These benefits are part of their everyday lives, like sharing expenses, giving and getting pocket money, and friends being influential in a generation that uses social media for guidance on purchases (Chua, 2025). Positive reasons are thus a source of motivation continuously instead of a one-shot.

6.2 Perceived Usefulness and Continuance Intention (H2)

Contrary to expectations, H2 was not supported (β = −0.055, t = 0.759, p = 0.448). Perceived usefulness was important in the TAM but was not direct influence on youth's continuance intention. In line with

Abdul-Halim et al. (2022), the perceived usefulness of e-wallets did not directly affect their continuance use in Malaysia, and Ghazali et al. (2026) came up with the same result where perceived usefulness did not directly affect digital banking usage intention in the city of Jakarta. There are three possible explanations. For the digital-native generation (Z) usefulness is basic and taken for granted – if there's an app that's not useful, they won't use it, it's just not a differentiator. Second, there are indirect paths to continuance from usefulness to satisfaction, as ECM suggests, which were not examined in this model. Third, the variance shared by PU and RFA was considerable (HTMT = 0.911), and the relative advantage part of RFA may have captured a lot of variance that was accounted for by the PU. These explanations indicate that, for young users, the everyday reasons for using the product are more important than the general assessment of usefulness following adoption.

6.3 Satisfaction and Continuance Intention (H3)

H3 was supported ($\beta = 0.304$, $t = 3.987$, $p < 0.001$): Young users who are satisfied with their digital banking experience are more likely to continue using it. This is in agreement with Bhattacherjee (2001)'s ECM, since satisfaction is one of the major factors to encourage continuance, and with Rizvee et al. (2025) who revealed that satisfaction has significant effect on continuance intention of mobile financial services. For Gen Z, it has significant meaning because they are accustomed to swift and smooth apps and are able to switch to another digital bank with little effort, and if the experience does not delight them, they will jump to a competing bank. As far as BRT is concerned, satisfaction also bolsters users' motivations for using the service: positive experiences allow them to believe that their initial motivations were appropriate, so they are more likely to continue using the service.

6.4 Reasons Against Adoption and Continuance Intention (H4)

H4 was not supported ($\beta = -0.014$, $t = 0.521$, $p = 0.603$). BRT, therefore, argues that barriers to a behavior decrease intention (Westaby, 2005), but the non-significant result indicates that factors that may include perceived risk, complexity and attachment to traditional banking are less important once young users have embraced and experienced digital banking. The fact that all respondents were current users meant that they are past whatever barriers may have hindered adoption. This interpretation is in line with Kaur et al. (2020) who believed that there were some innovation resistance barriers insignificant as an explanation for the post adoption outcome. This explanation is supported by the Gen Z profile of the sample: young people who have had mobile technology as part of their lives since childhood are not attached to branch banking and do not perceive digital banking in branch as unusual and low status, which has an impact on traditional and image barriers. The reasons against adoption seem to be primarily acting as deterrents before adoption and not as a hindrance to ongoing use among youth adoptees. This is not to say that such worries are never going to exist; a security breach or fraud incident may cause risk-related concerns to re-emerge rapidly.

6.5 Digital Financial Literacy and Continuance Intention (H5)

H5 was supported and DFL was the most predictive of continuance intention (β = 0.399, t = 5.035, p < 0.001). The BRT perspective is that DFL can be considered as an enabling capability that enables users to develop and assess positive reasons for ongoing use. Higher DFL also provides greater access to understanding financial products, evaluating risks, and helps to navigate digital banking features, giving higher DFL users more reasons and confidence to keep going. This aligns with the study by Tetteh and Kwateng (2026) which showed that DFL can be used to maintain user involvement in the use of mobile financial services. This has an even greater impact on Gen Z. The digital engagement of young people is driven by competence, not financial resources, as most respondents reported earning RM1,000 to RM1,999 per month, but DFL still came out on top as a driver. The discovery also suggests that it is not sufficient to be a digital native: comfort with technology is not the same as financial knowledge to well use digital financial services (Lyons & Kass-Hanna, 2021). The combination of young users and two is the highest retention risk.

6.6 Theoretical Implications

This study makes four theoretical contributions. Firstly, it takes BRT (Westaby, 2005) from the adoption phase to the post adoption phase and shows that there is an asymmetry between the two types of reasoning of young users. The reasons for adoption were found to further build the continuance intention, while the reasons for not adopting did not. In this context, reasons against serve as gatekeepers at the time of adoption, which is congruent with their function as adoption barriers in innovation resistance studies (Claudy et al., 2015), and reasons for as sustainers of involvement later. This pattern is different from Addae et al. (2026), who reported that reasons against continued being associated with the continuance intention of using FinTech, which calls for the need to test BRT in specific post-adoption contexts and users. Thus, any future application of BRT to continuance should not assume that the two sets of reasons are equally important at every phase of the customer relationship or equally important across generations (Sahu et al., 2020).

Second, the study extends the study of ECM (Bhattacherjee, 2001) to licensed digital banking for young users. There were almost no significant direct effects when perceived usefulness was measured following the control of reasons for adoption, satisfaction, and DFL, as ECM predicted. It is also consistent with the context-dependent view of continuance role of perceived usefulness (Franque et al., 2021) and its mediation by satisfaction (Bhattacherjee, 2001; Bergmann et al., 2023). It also implies that the context-specific reasons for use described by BRT are similar, and largely overlap with, the variance typically related to the perceived usefulness.

Third, this study proposes DFL as a capability-based antecedent for an integrated reasons-and-experience model of continuance. Perhaps more important, it was found that when users of DFLs were asked about their beliefs and emotions, the strongest predictor was the DFL's. Yet, it was also revealed that the DFLs with the strongest beliefs and emotions were not the strongest predictors because those users were not the best skilled to use the service with confidence. This indicates that, in addition to beliefs and emotions, continuance models in digital finance should also account for what the user is

capable of doing with the service. Digital fluency must not be a replacement to financial capability, especially for young users.

Finally, the study offers evidence from Malaysia's recently licensed digital banks (Bank Negara Malaysia, 2022) which is different to the sample and context used in previous studies of e-wallet and mobile banking continuance. It is in response to the requirement for evidence on post-adoption behaviour in emerging markets of digital banking by generation.

6.7 Practical Implications

The findings provide several insights for digital banks wanting to stay young customers. Therefore, financial education can and should not only be called corporate social responsibility, but rather a retention strategy, as DFL was the most important driver of continuance. Digital banks can also collaborate with universities to conduct financial education seminars, incorporate mini-labelling videos explaining the features as users encounter them and offer budget planning, savings goal setting, and spending insights, which are skills that can be developed over time. As Gen Z spends a lot of time on platforms like TikTok, YouTube and Instagram (Chua, 2025), short and simple educational content on these platforms is more likely to be effective at reaching young audiences than traditional campaigns.

Satisfaction was the second most important driver, which is why it is important to closely monitor the post-adoption experience by digital banks. For young users who can switch apps at a whim, this means stables, fast transactions, speedy in-app support and complaints handling, and transparent fee and service updates. The reasons of adoption are still relevant and banks should continue to promote all the day-to-day features that initially enticed young customers, including convenience, speed and cost saving; and include referral programmes and peer-based functionality to reinforce social influence in the student and friend network.

The reasons against adoption did not prove to be significant, indicating that if the youth are already using the adoption services, investments should be made in increasing their enabling reasons, satisfaction and literacy levels rather than decreasing their reasons against using adoption services further. This does not imply that security and privacy can be forgotten, they are the minimum expectation that should be kept and it is only through experience and capability that they will establish loyalty. Similarly, the lack of significance of perceived usefulness suggests that marketing content that stresses general usefulness will not keep Gen Z users. Rather than this, messages should focus on specific, pupil-centered uses, for example, organizing allowances, sharing costs and saving for personal targets.

7. Conclusion

This study used BRT, ECM and digital financial literacy framework to analyze the influencing factors on the continuance intention of Gen Z users towards digital banking in Malaysia. The results indicate that digital financial literacy, satisfaction and reasons for adoption all significantly and positively impact continuance intention, with digital financial literacy proving to have the greatest impact of the three.

Reasons against adoption and perceived usefulness, on the other hand, did not directly influence the adoption.

The results address the three research questions. RQ1 showed that reasons for adoption still influence young users' post-adoption experiences, whereas reasons against adoption do not, suggesting an asymmetry in post-adoption reasoning. With RQ2, it was the satisfaction, rather than perceived usefulness, that was the experience-based factor in continuance, suggesting that usefulness is a minimum requirement that, over time, would become an expectation for Gen Z digital natives. In RQ3, the most important predictor is digital financial literacy, indicating that financial ability rather than comfort with technology is key to maintaining digital banking relationships for young users.

The study goes beyond the conventional usage of BRT or ECM, shows how reasons-based, experience-based and capability-based explanations of continuance are complementary, and offers evidence regarding Gen Z users of licensed digital banking in Malaysia. Practitioners find that while getting young customers to download and open an account is the first step, it is not the last. They must be retained by developing their digital financial literacy, providing them with an always satisfying experience and continually remind them of the positive effects that brought them on board in the first place. These learnings help inform retention strategies and policies that can help build a generation of financially capable, engaged digital banking users in Malaysia.

8. Policy Implications and Suggestions

The results offer several suggestions for regulators, digital banks and the education sector seeking to sustain digital banking engagement in Malaysia, particularly among young users:

1. **Embed digital financial literacy in national and institutional programmes.** Since digital financial literacy had the highest correlation with the continuance intention, the regulators and financial education bodies need to increase financial education efforts on digital financial literacy explicitly, such as safe usage of digital banking applications, recognition of the terms of digital financial products and the understanding of online fraud. Young adults are an important user base for digital banks, and can be engaged by integrating short modules on digital finance into the orientation programmes or co-curricular activities at universities and colleges.
2. **Require clear, user-friendly product disclosure.** User satisfaction is dependent upon users' experiences being consistent with their expectations. Regulators can assist in this by mandating that there is a consistent, clear and transparent disclosure of fees, interest rates and limits and processes for resolving disputes on the digital banking app, to prevent any unpleasant surprises that may impact satisfaction and trust.

3. **Monitor engagement, not only onboarding.** Supervisors should request that digital banks report on metrics that give a better indication of sustained and active usage of adoption programs, in addition to the number of customers, such as active account ratios or account dormancy. This would give better visibility of the impact of digital banking on financial participation.
4. **Strengthen service quality and complaint resolution.** Digital banks must be able to resolve customer complaints quickly and easily in their app, have explicit service levels commitments and provide clear and readily available human support for more complex complaints. This can be facilitated by regulators setting expectations for rapid and timely resolution of disputes which can help to ensure satisfaction leading to ongoing business.
5. **Maintain security and consumer protection as baseline safeguards.** While there may be no reason to discontinue use of the product for existing users, risk-related concerns can come up very quickly following a security breach or fraud incident. In the interim, digital banks must increase their spending on authentication, fraud detection, data protection and other security measures, while regulators continue to enforce strong consumer protections that prevent these challenges from resurfacing.

The recommendations move the policy discourse from access to digital banking products to informed, satisfied and capable engagement, especially with the young generation in Malaysia. This change is crucial for licensed digital banks to play a meaningful and sustainable role in financial inclusion and for the overall goals of the Financial Sector Blueprint 2022–2026 (Bank Negara Malaysia, 2022).

9. Limitations and Scope of Future Study

Although this study helps in understanding digital banking continuance in Malaysia, it has some limitations. First, the study was intentionally limited to university students of Generation Z (15–25 years old). This focus is consistent with the study's goal but results might not be applicable to working youth, older Gen-Z members, or to older generations, who might have more risk or traditional concerns. The sample was also more likely to be female (66.8%) and low income. Further research should explore the use of non-student young adults and compare Gen Z to the Millennials and older using multi-group analysis by age, income and gender.

Second, the study employed a cross-sectional design which limits the study to snapshots of the continuance intention at a particular time, and does not allow to determine if the reasons, satisfaction and literacy change over time, as users' experience increases. Longitudinal designs would enable researchers to assess if motivations to adopt diminish over time after adoption and if digital financial literacy increases with adoption.

Third, the study was conducted to measure continuance intention instead of actual continued use. The goal – gap between intention and behavior is illustrated in the introduction (Bortne et al., 2026). In the future, data from real usage signals such as logins, transaction count or inactivity of accounts from digital banks could be incorporated into the survey data.

Fourth, discriminant validity between perceived usefulness and reasons for adoption was not fully established, and this overlap may partly explain the non-significant effect of perceived usefulness. Future research should define and measure these constructs more distinctly to minimize conceptual overlap, for example by separating relative advantage from performance-related usefulness.

Fifth, the present study focused primarily on direct relationships among the constructs. Future research could examine more complex mechanisms through mediation and moderation analysis. For example, perceived usefulness may operate indirectly through satisfaction, as suggested by the Expectation Confirmation Model, while digital financial literacy may strengthen satisfaction or reduce perceived barriers to continued use. Potential moderating factors such as trust, habit (Limayem et al., 2007), length of digital banking experience, and type of digital bank should also be investigated.

Declarations

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Author contributions

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Data availability

The datasets are the respondent’s opinions collected through a structured questionnaire, which will be available from us on reasonable request.

Consent to Participate

Informed consent was obtained from all individual participants included in this study. Participation was voluntary, and respondents were informed about the purpose of the study, data confidentiality, anonymity, and their right to withdraw at any time without penalty.

Ethical Standards

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki and in compliance with the ethical guidelines approved by the Research Ethics Committee (REC) of Multimedia University (MMU).

Ethics Approval

Ethical approval for this study was obtained from the Research Ethics Committee (REC), Multimedia University (MMU), Malaysia, under Approval Number EA0612026

Human Ethics Approval and Consent to Participate

This study received ethical approval from the Research Ethics Committee (REC), Multimedia University (MMU), Malaysia (Approval No. EA0612026). The research was conducted in accordance with the ethical principles of the Declaration of Helsinki. Informed consent was obtained from all participants prior to their participation in the study. Participation was voluntary, and all responses were collected anonymously and treated confidentially

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Figures

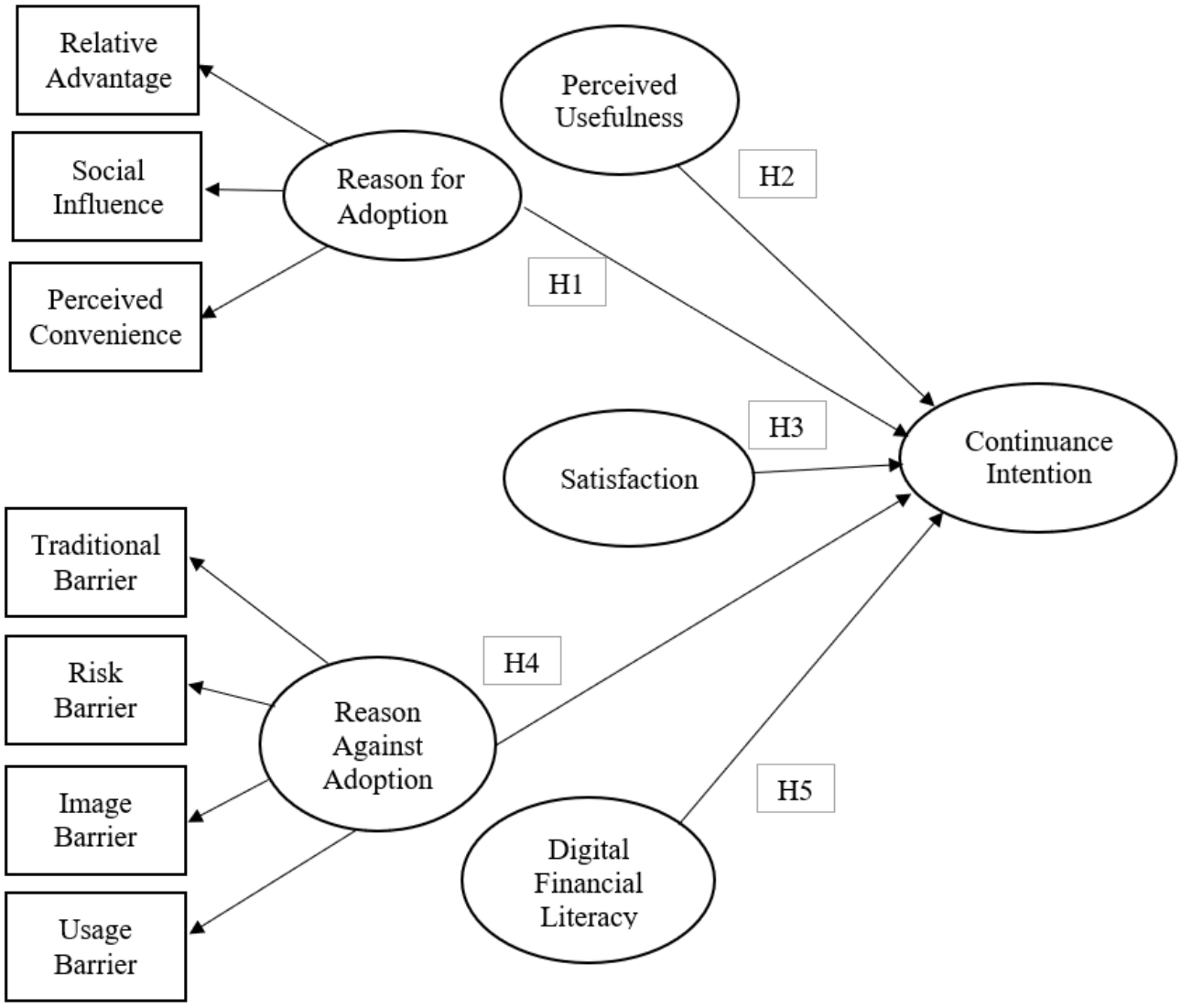


Figure 1

Research model

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