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DETERMINANTS OF DIGITAL BANKING ADOPTION AMONG CEBUANO SENIOR CITIZENS: A BASIS FOR DIGITAL FINANCIAL INCLUSION PROGRAM

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ABSTRACT

This study investigated the determinants of digital banking use among selected senior citizens in Cebu City, Philippines, and generated inputs for a Digital Financial Inclusion Short Course tailored to older adults. Anchored on the Unified Theory of Acceptance and Use of Technology, the study employed a correlational research design involving 204 senior citizen respondents. Data were collected through a structured survey questionnaire that measured demographic characteristics, digital transaction usage, and behavioral determinants, including perceived usefulness, perceived ease of use, acceptability, trust, and security. Descriptive and inferential statistical tools – specifically frequency distribution, percentage, weighted mean, Chi-square test of association, and regression analysis – were utilized to analyze the data at a 0.05 level of significance. Results indicated that although respondents generally expressed positive perceptions of digital banking, actual usage remained limited. A substantial proportion reported no internet access (49%), did not engage in online purchases (62.1%), and did not perform online payment transactions (71.1%). Further analysis revealed significant relationships between digital transaction usage and overall digital banking utilization. Moreover, perceived usefulness, perceived ease of use, trust, and security were found to be significant predictors of adoption. The findings underscore the need to enhance digital literacy, strengthen trust-building mechanisms, and develop simplified, user-friendly digital banking platforms for senior citizens. In response, the study proposes a Digital Financial Inclusion Short Course aimed at equipping older adults with the necessary knowledge, skills, and confidence to safely and effectively utilize digital financial services. This initiative contributes to advancing inclusive financial participation among the aging population.

KEYWORDS: *Master's in Business Administration, Digital Banking, Senior Citizens, Financial Inclusion, Digital Literacy, Technology Acceptance, Trust, Security, Cebu City*

INTRODUCTION

The rapid growth of digital financial technologies has transformed the way individuals access and manage banking services; however, this shift has also highlighted a critical intersection between population aging and the digital divide, where senior citizens are at a higher risk of being excluded from digital financial systems. As digital banking becomes increasingly dominant, older adults—who often face limitations in digital literacy, access to technology, and confidence in online platforms—may struggle to keep pace with these advancements. This growing disparity raises concerns about financial inclusion, particularly in developing countries like the Philippines, where gaps in digital access and skills remain significant.

Digital banking encompasses a wide range of electronically delivered financial services, including cash deposits and transfers, withdrawals, bill payments, loan and portfolio management, applications for financial products, and investments in financial services, as defined by North (2021). Globally, digital banking continues to expand, with approximately 2.5 billion users worldwide, while in the Philippines, around 13.2 million individuals engage in digital banking. Notably, individuals aged 55 to 65 years and above represent a significant portion of bank account holders, accounting for about 25 percent of users, as reported by Juniper Research (2021) and Laycock (2021). Despite this growing participation, the extent to which senior citizens fully utilize digital banking services remains uncertain, particularly in terms of the underlying factors that influence their adoption or avoidance.

Senior citizens often face several barriers in adopting digital banking. These include concerns about fraud and online security, limited access to appropriate digital devices, and a lack of technical knowledge and confidence. TD Bank Group (2020) emphasized that older adults require adequate resources, skills, and guidance to effectively and confidently manage their finances in a digital environment. Without these, many seniors remain hesitant or excluded

from digital financial systems. This highlights the need to better understand the behavioral and contextual factors that shape their engagement with digital banking technologies.

Previous studies have provided insights into the experiences of elderly users in digital banking. Makela (2019) found that the use of electronic banking among senior citizens has increased over time, particularly when services are simple and relevant to their needs. Similarly, Gaitan (2015) emphasized the advantages of internet banking for the elderly, particularly its accessibility and convenience, which help overcome physical limitations associated with aging. However, other studies have identified critical challenges. Asmi and Ishaya (2012) found compatibility to be a major factor influencing adoption, while Ronning and Solvberg (2017) noted that older individuals often struggle to fully adapt to the demands of a digital society. Furthermore, concerns related to security, privacy, and trust remain prevalent, as highlighted by Gathongo (2019) and Diako, Klopper, and Lubbe (2012). Nayana and Susheela (2020) also identified inadequate knowledge, lack of infrastructure, and difficulties in accessing banking services as key barriers. Jin, Kuang, and Fan (2021) further pointed out that limited awareness of digital banking options leads many seniors to continue relying on traditional banking methods despite the inconvenience.

While these studies provide valuable insights, most are situated in foreign contexts such as Europe, Africa, and South Asia, particularly in countries like India. There is a notable lack of localized research in Southeast Asia, especially in the Philippines, where socio-economic conditions, digital infrastructure, and cultural attitudes toward technology differ significantly. This gap is critical, as the Philippines remains one of the countries with relatively low digital banking penetration in Asia, as discussed by Ramanathan et al. (n.d.). Additionally, the country experiences a high digital divide, estimated at around 60 percent, according to the World Bank (2020), which further limits access and adoption of digital financial services. Szijarto (2018) also noted that many Filipinos remain reluctant to adopt digital banking due to the lack of compelling user experiences that would encourage them to transition away from traditional branch-based transactions.

At the same time, the shift toward digitalization in the banking sector presents both opportunities and challenges. Koskinen and Manninen (2021) explained that digital banking can significantly improve operational efficiency and profitability for financial institutions, potentially reducing the need for physical branches and human resources. However, this transformation may unintentionally marginalize vulnerable populations, such as senior citizens, who may not be adequately prepared to adapt to digital systems. The Organization for Economic Co-operation and Development (2021) emphasized that access to financial products and services is essential for the well-being of older adults and plays a crucial role in promoting financial inclusion. Ensuring that senior citizens can effectively access and utilize digital financial services is, therefore, not only a technological issue but also a social and economic concern.

Despite the recognition of these challenges, there remains a lack of comprehensive, data-driven studies in the Philippine context that examine both the personal characteristics and behavioral perceptions of senior citizens as determinants of digital banking usage. More importantly, there is a gap in translating such findings into practical, targeted interventions that can directly address the needs of this group. Existing efforts toward digital financial inclusion often lack a structured, evidence-based foundation that considers the specific barriers faced by elderly users.

This study is further aligned with the United Nations Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities). Digital financial inclusion plays a crucial role in empowering individuals, especially vulnerable populations such as senior citizens, by improving access to financial services and enabling more efficient management of financial resources. By addressing barriers to digital banking adoption, this study contributes to reducing financial exclusion and promoting inclusive economic participation among older adults. Furthermore, the development of a digital financial inclusion short course supports lifelong learning and capacity-building, which are essential in achieving sustainable and inclusive development.

In response to these gaps, this study aims to determine the determinants of digital banking use among selected Cebuano senior citizens by examining their personal profiles, usage behaviors, and behavioral perceptions. By integrating these factors, the study seeks to provide a more holistic understanding of the drivers and barriers influencing digital banking adoption among the elderly. Furthermore, the findings of this study will serve as the basis for the development of a digital financial inclusion short course specifically designed for senior citizens. This proposed intervention aims to enhance digital literacy, improve confidence in using digital financial platforms, address concerns related to security

and trust, and ultimately empower senior citizens to actively participate in the digital financial ecosystem. Through this, the study contributes to bridging the gap between rapid technological advancements in banking and the need for inclusive financial access among the aging population.

Review of Related Literatures

This study is anchored on established theories of technology acceptance and behavioral response, particularly the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003) and the Protection Motivation Theory (PMT) proposed by Tanner et al. (1989). These theories are supported by relevant Philippine legal frameworks that ensure the safety, security, and protection of individuals engaging in digital financial services.

The Unified Theory of Acceptance and Use of Technology (UTAUT) explains how individuals accept and use new technologies based on key determinants such as performance expectancy, effort expectancy, social influence, and facilitating conditions, as emphasized by Venkatesh et al. (2003). Momani (2020) described UTAUT as one of the most comprehensive and effective models in explaining user behavior toward technological adoption, as it captures both intention and actual usage. Furthermore, UTAUT evolved from the Technology Acceptance Model (TAM), where performance expectancy and effort expectancy correspond to perceived usefulness and perceived ease of use, respectively, as explained by Lanlan et al. (2019).

In the context of this study, UTAUT provides a strong framework for understanding how Cebuano senior citizens decide whether to adopt digital banking. The variables perceived usefulness and perceived ease of use directly reflect how older adults evaluate the benefits and complexity of digital banking systems. These factors are particularly relevant since senior citizens may be more sensitive to difficulty and practicality when adopting new technologies. Additionally, facilitating conditions relate to access to devices, internet connectivity, and digital literacy, which are included in the respondents' usage profile. Through this, UTAUT supports the study by explaining how both personal characteristics and behavioral perceptions influence the adoption and use of digital banking among senior citizens.

Moreover, UTAUT also emphasizes the role of external and environmental factors that may influence technology adoption. In the case of senior citizens, these include family support, assistance from younger relatives, and exposure to digital environments. Social influence, as one of the core constructs of UTAUT, is particularly significant among older adults, as their willingness to adopt digital banking may be shaped by encouragement or guidance from trusted individuals. This highlights that adoption is not solely based on individual perception but is also influenced by social and environmental contexts, further strengthening the relevance of UTAUT in this study.

Complementing UTAUT, the Protection Motivation Theory (PMT) proposed by Tanner et al. (1989) is integrated into the study to account for the role of risk perception and protective behavior in digital banking adoption. While UTAUT explains the cognitive and usability-related factors influencing technology acceptance, PMT strengthens the framework by addressing how individuals respond to perceived threats associated with digital environments.

In the context of this study, PMT is reflected in the variables trust and security, which are critical determinants of digital banking usage among senior citizens. Older adults often associate digital banking with risks such as fraud, identity theft, and data breaches, which may influence their willingness to adopt such technologies. As such, the decision to engage in digital banking is not solely based on perceived usefulness and ease of use, but also on the individual's assessment of safety and their confidence in managing potential risks.

Furthermore, the integration of PMT supports the inclusion of digital literacy and guided exposure as essential components in addressing these concerns. When senior citizens are equipped with knowledge, skills, and practical experience, their perceived ability to cope with digital risks improves, thereby increasing their trust and willingness to use digital banking services. This reinforces the study's direction toward developing a digital financial inclusion short course, which aims to reduce perceived threats and strengthen user confidence.

These theories guided the identification of key variables in the study, including perceived usefulness, perceived ease of use, acceptability, trust, and security as determinants of digital banking usage. Additionally, age and digital literacy are recognized as important mediating variables. The American Psychological Association (2021) explained that although older adults are capable of learning new skills, they typically require more time and support due to changes in cognitive processing. This supports the inclusion of senior citizens as a distinct group whose adoption of digital banking is influenced by both psychological and experiential factors.

Furthermore, digital literacy plays a critical role in bridging the gap between intention and actual usage of technology. Even if senior citizens perceive digital banking as useful, limited digital skills may hinder their ability to fully utilize such platforms. This reinforces the need to examine both behavioral perceptions and actual usage profiles in this study, ensuring a comprehensive understanding of digital banking adoption among older adults.

In addition to theoretical foundations, this study is supported by relevant Philippine laws that establish the legal and security framework of digital financial transactions. These legal bases strengthen the study by addressing critical concerns related to trust, security, and data protection, which are key factors influencing the adoption of digital banking among senior citizens.

Republic Act No. 8792, or the Electronic Commerce Act of 2000, provides legal recognition to electronic documents, signatures, and transactions, ensuring that digital financial activities are valid and enforceable. This law supports the study by reinforcing the legitimacy and reliability of digital banking systems, which can enhance the perceived usefulness and acceptability of these platforms among senior citizens. When individuals are aware that digital transactions are legally protected, they are more likely to trust and utilize such services.

Beyond legal recognition, this law also promotes the development of secure electronic systems, encouraging financial institutions to adopt reliable digital infrastructures. This directly supports the study's focus on digital banking adoption, as improved system reliability contributes to better user experience, particularly for senior citizens who require assurance and simplicity when engaging in online financial transactions.

Republic Act No. 10175, or the Cybercrime Prevention Act of 2012, criminalizes online offenses such as hacking, identity theft, and fraud. This law directly supports the study by addressing the security concerns of senior citizens, who are often vulnerable to cyber threats. By ensuring that there are legal consequences for digital crimes, this law contributes to building trust in digital banking systems, thereby encouraging adoption among older users.

Moreover, the existence of this law reinforces the importance of awareness and education in preventing cybercrime. Senior citizens who are informed about common online threats and legal protections are more likely to feel secure when using digital banking platforms. This further strengthens the relevance of the proposed short course, which aims to educate seniors not only on how to use digital banking but also on how to protect themselves from cyber risks.

Republic Act No. 10173, or the Data Privacy Act of 2012, protects individuals' personal information and requires institutions to implement strict data security measures. This law is closely related to the study variable security, as it assures users that their personal and financial data are safeguarded. For senior citizens, who may be hesitant to share sensitive information online, this legal protection plays a crucial role in increasing their confidence and willingness to engage in digital banking.

In addition, this law promotes accountability among financial institutions in handling personal data, ensuring that users are protected from unauthorized access and misuse of information. This is particularly important for senior citizens, who may have heightened concerns about privacy. By reinforcing data protection, the law supports the development of trust, which is a key determinant examined in this study.

Overall, the integration of UTAUT and PMT, supported by these legal frameworks, provides a comprehensive foundation for this study. The theories explain the behavioral and perceptual factors influencing digital banking adoption, while the legal bases reinforce the institutional support necessary to build trust, ensure security, and promote confidence among users. Together, they justify the need to examine the determinants of digital banking use among Cebuano senior citizens and support the development of a digital financial inclusion short course that addresses both behavioral barriers and real-world concerns. This integration ensures that the study is not only theoretically grounded but also practically relevant in promoting digital financial inclusion among the elderly population.

Research Methodology

This study used a correlational research design to determine the relationship among variables under study. Online survey were also used to gather the data, using an adapted research questionnaire from UTAUT framework in a 4-point likert scale. There were 204 respendents of this study who are classffied as senior citizens. They were selected through a convenience sampling based on the accessibility and willingness to participate. Assistance was provided only when necessary to help respondents navigate the survey instrument, ensuring that responses remained independent and unbiased.

The researchers employed a questionnaire adapted from the standardized version of the UTAUT questionnaire as the primary data collection instrument for the study. The questionnaire consisted of seven parts with a total of thirty-four (34) items, and the identified variables served as the basis of the inquiries, which were measured using a 4-point Likert Scale. The variables considered in the study included perceived usefulness, perceived ease of use, acceptability, trust, security, as well as age, income, and digital literacy level. Furthermore, a pilot test was conducted to assess the reliability and functionality of the instrument within the selected environment.

Table 1
Mean Range Scores of the Perceived Determinants of Online Banking Use and Interpretation

Categories	Weight	Scale Value	Verbal Description
Strongly Agree	5	4.2-5.0	Respondents perceived the behavior to manifest at all times.
Agree	4	3.4-4.1	Respondents perceived the behavior to manifest most of the time.
Neutral	3	2.6-3.3	Respondents perceived the behavior to manifest sometimes only.
Disagree	2	1.8-2.5	Respondents RARELY perceived the behavior manifestation.
Strongly Disagree	1	1.0-1.7	Respondents NEVER perceived the manifestation of the behavior.

The pilot test was conducted among a small group of senior citizens who possessed similar characteristics to those included in the actual study but were not part of the final sample. The purpose of the pilot testing was to evaluate the internal consistency of the instrument and determine whether the items effectively measured the intended constructs. The pilot testing yielded a Cronbach's Alpha coefficient of 0.73, which indicated an acceptable level of reliability for the instrument.

To properly analyze and interpret the data gathered in this study, several statistical tools were used. These statistical methods allowed the researcher to organize the responses of the senior citizen respondents and draw meaningful conclusions from the collected data. The statistical techniques employed in the study included frequency, percentage, weighted mean, and the chi-square test of association. Each of these statistical tools served a specific purpose in answering the research questions and in presenting the results of the study clearly and systematically.

Frequency. This tool was used to determine the number of respondents who belonged to a particular category. This statistical tool was applied in presenting the personal profiles of the respondents, such as age, gender, educational attainment, and marital status. It was also used in describing the digital transaction usage profile, including gadget ownership, frequency of internet access, online purchasing behavior, online payment practices, and commonly used platforms. By identifying how many respondents selected a particular response, the researcher was able to provide a clearer picture of the characteristics and behaviors of the senior citizens who participated in the study.

Percentage. This was used to determine the proportion of respondents in each category relative to the total number of participants. Converting frequencies into percentages made the data easier to interpret and compare. For example, presenting the percentage of respondents who owned smartphones or those who accessed the internet daily helped illustrate the level of digital exposure among senior citizens. Percentages were also used to describe how many respondents engaged in online purchases, online payments, and other digital financial activities. Through percentages, the study was able to highlight patterns and trends in the respondents' digital transaction behavior.

Weighted Mean. This was utilized to determine the level of perception of the respondents toward digital banking. Specifically, it was used to analyze the respondents' perceptions in terms of perceived usefulness, perceived ease of use, acceptability, trust, and security. Since these variables were measured using statements rated on a five-point Likert scale, the weighted mean allowed the researcher to compute the average score of the responses for each indicator. The resulting mean values were then interpreted using a predefined scale to determine the level of agreement of the respondents. Through this method, the researcher was able to assess how the respondents generally viewed digital banking and whether they perceived it as useful, easy to use, trustworthy, and secure.

Pearson's correlation coefficient is used as a statistical tool to measure the strength and direction of a linear relationship between two continuous variables. It allows researchers to determine if changes in one variable are associated with changes in another, helping to test specific hypotheses without implying a cause-and-effect relationship. By providing a standardized value between negative one and positive one, it gives your study a precise, objective metric to show whether your variables move together, move in opposite directions, or have no linear connection at all.

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RESULTS AND DISCUSSION

Profile of the respondents

The demographic profile of the respondents provides an overview of the age and gender distribution among senior citizens in Cebu City. Specifically, it presents information regarding the participants' age range and gender. The respondents consist of senior citizens residing in Cebu City who participated in the study.

Age and Gender

Table 2
Age and Gender of the Respondents

Gender	f	%
Male	64	31
Female	140	69
Total	**204**	**100**
Age	**f**	**%**
60-69	164	80.4
70-79	34	16.7
80-89	5	2.5
90-99	1	0.5
Total	**204**	**100**

The table provided information on the gender distribution of customers in the context of banking. The data indicated that the majority of customers were female (69%), while male customers comprised only 31% of the customer base. According to the data, only 31% of the client base was male, with the majority of customers (69%) being female. According to Sánchez-Fernández and Muñoz-Leiva (2010), the makeup of bank clientele in demographic surveys may be influenced by the fact that female clients are more likely to participate.

Additionally, the table presented the distribution of respondents according to age groups. Most respondents belonged to the 60–69 age group, followed by those in the 70–79 age group. Only a small percentage of respondents were within the 80–89 or 90–99 age groups. Many of the respondents were between 60 and 69 years old, which is common in community studies in the Philippines. People in this age group are usually still active and involved in their communities, making them easier to reach and more willing to participate than those who are much older (Cruz et al., 2019)

The implications of this gender distribution on digital banking were potentially significant. Although digital banking has increasingly become a preferred mode of banking for many customers, a gender gap in digital literacy and access to technology has been observed in various contexts. Women, particularly in developing countries, may have had more limited access to technology and may not have possessed the necessary digital skills to fully utilize digital banking services.

Furthermore, the data suggested that most respondents were older adults who may not have been as familiar or comfortable with digital technology. Digital banking providers, therefore, needed to consider this demographic profile when designing their products and services, ensuring that these were user-friendly and accessible to older adults.

Educational Attainment

Table 3
Highest Educational Attainment

	Frequency	Percent
Elementary	32	15.7
High School Level	48	23.5
High School Graduate	76	37.3
College Level	36	17.6
College Graduate	12	5.9
Total	**204**	**100**

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The data showed that the largest group of customers was high school graduates (37.3%), followed by those with high school-level education (23.5%) and those with college-level education (17.6%). The smallest group of customers was college graduates (5.9%). Education levels play a significant role in the adoption of digital financial services, with respondents who have higher educational attainment demonstrating greater awareness and usage of formal banking and mobile money services (Bangko Sentral ng Pilipinas, 2021).

The implications of this data on digital banking suggested that most customers may have had limited digital literacy skills, which could have affected their ability to fully utilize digital banking services. Therefore, digital banking providers needed to address this challenge by providing educational and training programs tailored to customers with varying levels of digital literacy. This involved offering simple and user-friendly interfaces, video tutorials, and other instructional materials designed to meet the needs of customers with different educational backgrounds.

Marital Status

Table 4
Marital Status

	Frequency	Percent
Married	142	69.6
Single	9	4.4
Separated	3	1.5
Widow	20	9.8
Widower	30	14.7
Total	**204**	**100**

The majority of the respondents (69.6%) were married, followed by widowers (14.7%) and widows (9.8%), while a smaller proportion were single (4.4%) and separated (1.5%). From a digital banking perspective, this distribution had several implications. For instance, married individuals may have been more likely to maintain joint bank accounts and may have shown interest in digital banking services that allowed them to manage their finances collaboratively. Meanwhile, widowers and widows may have required assistance in managing their finances after the loss of their spouse, and digital banking services could have provided them with convenient and accessible financial management options. Marital status affects financial decision-making and banking behavior, as married individuals are more likely to participate in joint financial planning and coordinated financial activities than singles or those without partners (Lusardi, Michaud, & Mitchell, 2017).

However, it was important to note that the data were based on a limited sample size and may not have fully represented the broader population. Thus, digital banking providers needed to adopt a more comprehensive approach in understanding their customer base to ensure that their products and services addressed the needs of various demographic groups, including those who may not have been fully represented in the dataset.

Digital Transaction Usage Profile of the Respondents

This section presents the digital transaction usage profile of the respondents, providing an overview of their access to digital devices, internet connectivity, online purchasing behavior, online payment practices, commonly used platforms, and transaction amounts. These indicators describe the actual level of digital engagement among senior citizens and serve as a basis for determining the extent to which digital banking is being practiced beyond perception. By examining these usage patterns, the study identifies behavioral trends that may influence the adoption and sustained use of digital financial services.

Gadget Ownership

Table 5
Gadget Ownership

	Frequency	Valid Percent
Smartphone	133	65.2
Laptop	8	3.9
Tablet	5	2.5
Others	58	28.4
Total	**204**	**100**

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The table revealed that 133 respondents, or 65.2%, owned smartphones. This finding indicated that the majority of respondents were already using digital devices, suggesting that they may not have required extensive introduction to adopting new technologies such as digital banking. Because the respondents were already familiar with smartphone functions, adopting digital banking applications likely did not present significant technological challenges. Familiarity with mobile devices greatly increases the likelihood of adopting digital services, indicating that prior smartphone experience facilitates a smoother transition to technologies such as digital banking (Yang et al., 2022).

Digital banking typically requires access to a smartphone or similar digital device, a stable internet connection, a registered bank or e-wallet account, and basic digital literacy skills such as navigating applications, entering passwords, and verifying transactions through one-time passwords (OTPs). Given that a substantial proportion of respondents owned smartphones, the fundamental hardware requirement for digital banking had already been met.

From a digital banking perspective, the data suggested that smartphone ownership was relatively high among the respondents, underscoring the importance of mobile-based banking services. Digital banking providers, therefore, needed to prioritize the development of mobile applications that were user-friendly, secure, and convenient, considering the widespread use of smartphones within the study population.

Frequency of Access to the Internet

Table 6
Frequency Access to the Internet

	Frequency	Valid Percent
Everyday	42	20.6
Every other day	21	10.3
Once a week	21	10.3
Rarely, once a month	20	9.8
None at all	100	49
Total	**204**	**100**

The data showed that 49% of respondents did not have internet access, while 20.6% reported using the internet daily. The remaining respondents accessed the internet at intervals such as once a week, every other day, or once a month. Both the level of internet awareness and frequency of use significantly predict internet banking adoption, with less frequent internet users being less likely to utilize digital banking platforms (Inhambre & Badoy, 2023).

This distribution suggested that a considerable portion of the respondents may not have had reliable internet connectivity, which could have limited their ability to utilize digital banking services effectively. Since digital banking requires stable internet access to perform transactions such as fund transfers, bill payments, and balance inquiries, inconsistent connectivity may have posed a significant barrier to adoption. As a result, digital banking providers needed to consider alternative service channels for individuals without regular internet access, such as SMS banking, telephone banking, or maintaining accessible physical branches.

At the same time, the data also indicated potential for increased digital banking adoption if more respondents gained consistent internet access. Providers, therefore, needed to prioritize initiatives that supported improved internet accessibility and digital literacy, as these factors could have encouraged greater utilization of digital financial services among the study population.

Frequency of Online Purchase

Table 7
Frequency of Online Purchase

	Frequency	Valid Percent
Everyday	13	6.4
Every other day	9	4.4
Once a week	20	9.9
Rarely, once a month	35	17.2
None at all	126	62.1
Total	**204**	**100**

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The largest group of participants (62.1%) indicated that they never engaged in online purchases, while the smallest group (4.4%) reported that they did so every other day. Thirteen participants (6.4%) stated that they engaged in online purchasing daily, 20 participants (9.9%) reported doing so once a week, and 35 participants (17.2%) indicated that they rarely engaged in online purchases, approximately once a month. Studies in the Philippines point to a clear "digital divide," especially among senior citizens, including those aged 60–69. Many in this group have limited digital skills or feel uncertain about online platforms. This helps explain why 62.1% of your respondents do not engage in online shopping, as they are more comfortable seeing products in person and dealing directly with sellers (Cruz et al., 2019).

The data indicated that a substantial proportion of respondents did not engage in online purchasing activities, which had important implications for digital and mobile banking adoption. Since mobile banking services often relied on the ability to conduct online transactions, including purchasing goods and services, the limited participation in online purchases suggested potential barriers to the broader use of digital financial services. This pattern may have been influenced by several factors, such as limited trust in online transactions, inadequate internet access, or a continued preference for traditional banking methods. To increase the adoption of mobile banking services, banks and other financial institutions needed to address these concerns by strengthening customer education initiatives and emphasizing the safety, security, and convenience of digital financial transactions.

Table 8
Frequency of Paying Online

	Frequency	Percent
Everyday	6	2.9
Every other day	3	1.5
Once a week	14	6.9
Rarely, once a month	36	17.6
None at all	145	71.1
Total	**204**	**100**

Frequency of Paying Online

Table 8 presents the frequency of paying online among the 204 respondents. The table displayed the data in terms of both frequency and percentage. The frequency column showed the number of respondents who paid online at a particular frequency, while the percentage column indicated the proportion of respondents who fell into each category.

According to the table, the majority of respondents, 145 out of 204 (71.1%), reported that they never paid online. This finding indicated that a substantial proportion of the sample did not use online payment methods for their transactions.

Among those who used online payment methods, the most common frequency was "rarely, once a month," with 36 respondents (17.6%) belonging to this category. Only a very small percentage of respondents reported paying online more frequently than once a week, with 6 respondents (2.9%) indicating daily usage and 3 respondents (1.5%) reporting payment every other day. For many new adopters, digital banking is perceived as a "secondary" tool rather than a daily necessity, with usage typically peaking around monthly salary cycles or deadline-driven payments (De Luna et al., 2021).

The data presented in Table 8 suggested the presence of significant untapped potential for digital and mobile banking services. Despite the increasing availability of online payment platforms, the majority of respondents had not adopted online payment methods. This pattern indicated that a large segment of the population remained reliant on traditional payment channels. For digital banking service providers, these findings underscore the need to strengthen customer education initiatives and promote the convenience, security, and accessibility of mobile banking as a viable alternative to conventional payment methods.

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Platforms Commonly Used in Purchasing

Table 9
Platforms Commonly Used in Purchasing

	Frequency	Percent
Shopee	19	9.3
Lazada	10	4.9
Grab	25	12.3
Others	150	73.5
Total	**204**	**100**

The table presented the frequency and percentage of platforms commonly used for purchasing. Among 204 respondents, 73.5% reported using platforms other than Shopee, Lazada, and Grab. Of the specified platforms, Shopee was the most frequently used, with 19 respondents (9.3%), followed by Grab with 25 respondents (12.3%), and Lazada with 10 respondents (4.9%). Shopee and Lazada are among the most popular e-commerce platforms in the country, with Shopee often leading in user traffic and market share, which aligns with the findings that Shopee was the most used specified platform (Statista, 2024).

The data suggested that although Shopee appeared to be the most commonly used platform among the listed options, a substantial portion of the respondents utilized other purchasing platforms. While the specific platforms under the "others" category were not identified in the table, this distribution indicated a diversity of e-commerce channels being accessed by the respondents.

Table 10
Platforms commonly used for paying

	Frequency	Percent
Gcash	68	33.3
Others	136	66.7
Total	**204**	**100**

Platforms Commonly Used in Paying

Out of 204 respondents, 68 (33.3%) reported using GCash for financial transactions, while the majority—136 (66.7%)—preferred other payment methods, primarily cash-based transactions. This indicates a stronger reliance on traditional payment methods over digital wallets. Although the use of digital payments continues to grow, many Filipinos still depend on cash for their everyday purchases. This aligns with your finding that 66.7% of respondents prefer traditional payment methods, likely because cash is seen as more dependable and immediately accepted by local stores (Bangko Sentral ng Pilipinas, 2024).

It's worth noting that this data only represents the respondents' preferences in this study and may not represent the entire population. Additionally, other factors may influence a person's choice of online financial transaction methods, such as availability, accessibility, security, and reliability of the service.

Average Expenditures Per Purchase Transaction

Table 11
Average Expenditures Per Purchase Transaction

	Frequency	Percent
Less than 500	145	71.1
501 to 1000	41	20.1
1001 to 3000	17	8.3
3001 to 5000	1	0.5
Total	**204**	**100**

Table 11 provided an overview of the average expenditures per purchase transaction based on frequency and percentage. The majority of transactions (71.1%) involved payments of less than ₱500, indicating that most respondents made relatively small purchases. Nevertheless, a considerable proportion of transactions reflected higher expenditures, with 20.1% falling between ₱501 and ₱1,000 and 8.3% ranging from ₱1,001 to ₱3,000. Only a very small percentage (0.5%) of transactions involved expenditures between ₱3,001 and ₱5,000. Low-value transactions

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are often motivated by convenience purchases, recurring needs, and smaller product categories, which explains why most consumers make smaller purchases more frequently than high-value transactions (World Bank, 2021).

The findings suggested that most respondents engaged in low-value transactions, which may have implied that they preferred making frequent but smaller purchases rather than large, infrequent expenditures. However, the presence of respondents who spent between ₱501 and ₱3,000 indicated that higher-value transactions were also observed within the sample. This distribution may have suggested potential opportunities for service providers to design targeted strategies, such as promotional incentives or loyalty programs, to accommodate varying spending behaviors.

Furthermore, the predominance of small-value transactions may have implied that digital and mobile banking institutions could have benefited from encouraging frequent low-value transactions, as higher transaction frequency may have translated into increased service utilization and potential revenue generation for providers.

Average Amount Per Payment Transaction

Table 12
Average Amount Per Payment Transaction

	Frequency	Percent
Less than 500	147	72.1
501 to 1000	42	20.6
1001 to 3000	14	6.9
More than 5000	1	0.5
Total	**204**	**100**

Among the 204 respondents, the majority (72.1%) reported spending less than ₱500 per transaction, followed by 20.6% who spent between ₱501 and ₱1,000, while only 6.9% spent between ₱1,001 and ₱3,000, and a very small proportion (0.5%) reported spending more than ₱5,000. This distribution indicated that most transactions involved relatively low amounts. In the Philippines, many people are used to buying goods in small amounts, a practice commonly known as “tingi.” This buying habit helps explain why most transactions (72.1%) are below ₱500, as families often choose to purchase affordable items daily instead of buying in bulk to better manage limited budgets (World Bank, 2022).

Table 11 further showed that the majority of payment transactions in pesos fell below ₱500, reinforcing the predominance of low-value transactions among the respondents. This pattern suggested that mobile banking providers may have needed to develop solutions that accommodated micropayments effectively. At the same time, providers also needed to ensure that their systems were capable of securely handling higher-value transactions, as these, although less frequent, still represented a segment of the transaction spectrum. The data may have also provided insights for the development of pricing structures for mobile banking services, wherein lower transaction fees for small-value payments could have encouraged greater usage. By analyzing transaction patterns and trends, mobile banking providers were better positioned to design services that aligned with customer spending behaviors and enhanced overall user experience.

Perceived Level of Digital Banking Usage

Table 13
Perceived Level of Digital Banking Usage

	Frequency	Percent
Unlikely	47	23
Less Likely	15	7.4
Moderate	22	10.8
Likely	80	39.2
Very Likely	40	19.6
Total	**204**	**100**

Table 13 presents the perceived level of digital banking usage among the respondents. The table showed that the largest proportion of respondents (39.2%) perceived themselves as likely to use digital banking services, while 19.6% indicated that they were very likely to do so. Conversely, 23% of the respondents reported that they were unlikely to

use digital banking services, and 7.4% stated that they were less likely to use such services. While a substantial portion of the population expresses willingness to use digital financial services, a notable minority remains hesitant or resistant, reflecting varying levels of digital readiness and confidence (Bangko Sentral ng Pilipinas, 2021).

The data suggested that although a considerable proportion of respondents expressed a willingness to use digital banking services, a notable segment still exhibited hesitation or resistance toward adoption. This pattern may have indicated the presence of underlying concerns or barriers influencing usage intention, highlighting the importance of addressing customer perceptions and enhancing awareness regarding the benefits and security of digital banking services.

Level Of Perception of The Respondents

This section presents the level of perception of the respondents toward digital banking, particularly in terms of perceived usefulness, perceived ease of use, acceptability, trust, and security. These perceptual factors reflect the cognitive and attitudinal disposition of senior citizens toward digital financial services and serve as key determinants influencing their intention and actual usage behavior. By analyzing these dimensions, the study assesses the extent to which digital banking is viewed favorably or unfavorably among the respondents, thereby providing insight into the underlying psychological factors that may affect adoption.

Perceived Usefulness of Digital Banking

Table 14
Perceived Usefulness of Digital Banking

Indicators	Mean	Interpretation
1. I find digital banking useful in today's time.	3.956	Agree
2. Using digital banking for financial transactions will boost my productivity.	3.897	Agree
PERCEIVED USEFULNESS [3. I believe that digital banking poses its usefulness for the elderly generation.]	3.931	Agree
4. I find the Use of digital banking to increase my efficiency in my daily life.	3.828	Agree
5. I believe that digital banking will be useful in my state as an elderly person.	3.926	Agree
Average Mean	3.9076	Agree

The table presented the results of a survey that aimed to measure the perceived usefulness of digital banking among the respondents. The survey utilized a Likert scale ranging from strongly disagree to strongly agree.
The overall average mean score for all items was 3.9076, which fell under the category of "Agree," indicating that the respondents generally perceived digital banking as useful most of the time. When digital platforms are perceived as beneficial and manageable, even elderly users recognize their usefulness, supporting findings that respondents agree digital banking can be advantageous for older generations (Morris & Venkatesh, 2000).

The first item indicated that the majority of respondents found digital banking useful in today's time, with a mean score of 3.956. This suggested that the respondents perceived digital banking as a convenient and efficient means of managing their finances, enabling them to save time and effort.

The second item reflected the perceived productivity benefits of digital banking, with a mean score of 3.897. This finding indicated that respondents believed digital banking streamlined financial transactions and allowed them to accomplish financial tasks more efficiently.

The third item showed that respondents perceived digital banking as useful for the elderly generation, with a mean score of 3.931. This suggested that digital banking was viewed not only as beneficial for technologically adept individuals but also as potentially advantageous for older adults who may have been less familiar with digital technologies.

The fourth item revealed that respondents believed digital banking increased efficiency in their daily activities, as reflected by a mean score of 3.828. This further supported the perception that digital banking contributed to time savings and improved task management.

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Finally, the fifth item indicated that respondents believed digital banking would remain useful as they aged, with a mean score of 3.926. This finding suggested that digital banking was perceived as a sustainable and valuable financial management tool across different stages of life.

Perceived Ease of Use of Digital Banking

Table 15
Perceived Ease of Use of Digital Banking

Indicators	Mean	Interpretation
1. I would find digital banking easy to use.	3.961	Agree
2. I think digital banking is flexible and understandable to interact with.	3.833	Agree
3. I believe that it would be easy for me to become skilled at using digital banking.	3.867	Agree
4. I find it easy if I am to do digital banking transactions in some circumstances (e.g., going out of town).	3.755	Agree
5. I think learning to operate digital banking would be easy for me.	3.804	Agree
Average Mean	**3.844**	**Agree**

Table 15 presents the results of the survey regarding the perceived ease of use of digital banking. The table displayed the mean score, category, and verbal description for each indicator.

The first indicator, "I would find digital banking easy to use," obtained a mean score of 3.961, which indicated that the respondents generally agreed that they would find digital banking easy to use. The verbal description for this category was "perceived the behavior to manifest MOST OF THE TIME."

The second indicator, "I think digital banking is flexible and understandable to interact with," received a mean score of 3.833, suggesting that respondents generally agreed that digital banking was flexible and understandable to interact with. The verbal description likewise fell under "perceived the behavior to manifest MOST OF THE TIME."

The third indicator, "I believe that it would be easy for me to become skilled at using digital banking," obtained a mean score of 3.867, indicating general agreement among respondents that acquiring skills in digital banking would be manageable. This indicator was also described as "perceived the behavior to manifest MOST OF THE TIME."

The fourth indicator, "I find it easy if I am to do digital banking transactions in some circumstances (e.g., going out of town)," yielded a mean score of 3.755, which indicated that respondents generally agreed that performing digital banking transactions under certain conditions was manageable. The corresponding verbal description remained "perceived the behavior to manifest MOST OF THE TIME."

The fifth indicator, "I think learning to operate digital banking would be easy for me," received a mean score of 3.804, which likewise reflected general agreement. The verbal interpretation was again categorized as "perceived the behavior to manifest MOST OF THE TIME."

The overall average mean score for all indicators was 3.844, which fell under the category of "Agree" and was described as "perceived the behavior to manifest MOST OF THE TIME."

The results suggest that respondents generally perceive digital banking as easy to use, flexible, understandable, and learnable. These perceptions likely reflect growing familiarity and increasing accessibility of digital banking platforms in recent years. Users who believe they can easily acquire the necessary skills to use digital banking services demonstrate stronger readiness for digital adoption, supporting indicators related to developing proficiency in digital banking usage (Bangko Sentral ng Pilipinas, 2021).

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Acceptability of Digital Banking

Table 16
Acceptability of Digital Banking

	Mean	Interpretation
1. I am willing to adopt the Use of digital banking.	3.926	Agree
2. I will feel confident if I am to use digital banking.	3.784	Agree
3. I would see myself using digital banking for handling my banking transactions.	3.775	Agree
4. I am open to new developments (i.e., digital banking) to make my life easy.	3.858	Agree
5. I will be glad to use different methods (i.e., smartphone, ATM Machines) to access banking activities.	3.833	Agree
Average Mean	**3.8352**	**Agree**

Table 16 provided information on the acceptability of digital banking among the respondents. The table presented the mean scores, categories, and verbal descriptions for five indicators related to digital banking acceptability.

The mean scores for all five indicators were above 3.5, indicating that respondents generally demonstrated a positive attitude toward digital banking. The overall average mean score of 3.8352 fell under the "Agree" category, further supporting this observation. Confidence in using digital platforms significantly enhances users' intention to adopt online and mobile banking systems, aligning with findings that respondents report confidence and a positive attitude toward digital banking (Venkatesh et al., 2012).

The first indicator, "I am willing to adopt the use of digital banking," obtained the highest mean score of 3.926. This suggested that respondents were open to adopting digital banking as a method of managing their financial transactions.

The second and third indicators, "I will feel confident if I am to use digital banking" and "I would see myself using digital banking for handling my banking transactions," also yielded mean scores above 3.5. These findings indicated that respondents exhibited a certain degree of confidence and positive disposition toward using digital banking services.

The fourth indicator, "I am open to new developments (i.e., digital banking) to make my life easy," recorded a mean score of 3.858, suggesting that respondents perceived digital banking as a tool that could simplify their banking activities and enhance convenience.

The fifth indicator, "I will be glad to use different methods (i.e., smartphone, ATMs) to access banking activities," likewise obtained a mean score above 3.5. This indicated that respondents were receptive to utilizing various digital platforms and channels to access banking services.

Trust In Digital Banking

Table 17
Trust In Digital Banking

	Mean	Interpretation
1. I can trust banking through digital means.	3.804	Agree
2. I trust digital banking because it makes it easier for me to access it and because it requires less travel.	3.794	Agree
3. I believe I can easily transfer money between accounts at other financial institutions and between accounts with other people.	3.706	Agree
4. I am confident in the way digital banking can handle my money.	3.706	Agree
5. I have confidence in digital banking to manage my funds even when I am 0t doing any transactions.	3.716	Agree
Average Mean	**3.7452**	**Agree**

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Table 17 provided information on the level of trust that respondents had in digital banking. The table presented five statements, each accompanied by a mean score, category, and verbal description reflecting the level of trust expressed by the respondents.

The overall average mean score of the five statements was 3.7452, which fell under the "Agree" category. This indicated that respondents generally trusted digital banking. The associated verbal description, "Perceived the behavior to manifest MOST OF THE TIME," suggested that respondents believed digital banking was dependable in handling financial transactions and managing their funds. Trust extends beyond platform security to encompass functionality and ease of use. Perceived security and protection of financial information play a crucial role in trust formation, with users expressing greater confidence in digital banking when they believe their funds are safeguarded, even during periods of inactivity (Yousafzai, Pallister, and Foxall, 2003).

Statement 1 indicated that respondents trusted banking through digital means, with a mean score of 3.804. This finding suggested that respondents perceived digital banking as a reliable method for managing their finances.

Statement 2 emphasized the convenience of digital banking, yielding a mean score of 3.794. This suggested that respondents trusted digital banking partly because it was easier to access and required less travel compared to traditional banking methods. The finding underscored the importance of convenience in shaping trust perceptions.

Statement 3, which pertained to the ease of transferring money between accounts and other financial institutions or individuals, obtained a mean score of 3.706. This indicated that respondents believed digital banking could facilitate fund transfers efficiently and without significant errors or delays.

Statement 4 reflected respondents' confidence in the ability of digital banking to manage their money securely, also with a mean score of 3.706. This suggested that respondents trusted digital banking to handle their finances accurately and safely, highlighting the role of security in trust formation.
Statement 5 indicated that respondents trusted digital banking to manage their funds even when they were not actively conducting transactions, as reflected by a mean score of 3.716. This implied that respondents believed digital banking platforms maintained financial security and account integrity even during periods of inactivity.

Security of Digital Banking

Table 18
Security of Digital Banking

	Mean	Interpretation
1. I believe that my account information and other confidential data will be protected because of embedded controls in digital banking.	3.789	Agree
2. I am confident that my money is secured with digital banking.	3.789	Agree
3. Financial transactions done online are more secure than traditional banking.	3.716	Agree
4. I believe that logical access management in digital banking guarantees the security of my bank accounts.	3.652	Agree
5. I think privacy is more important than convenience.	3.593	Agree
Average Mean	**3.7078**	**Agree**

Table 18 presents the results of the survey conducted to assess the perceived security of mobile banking among the respondents. The table reported the mean scores, category, and verbal description of the responses to five statements related to mobile banking security.

The overall average mean score of 3.7078 indicates a strong perception of security among your respondents. The findings suggest that users feel confident in the embedded safeguards of digital systems, even ranking online security as superior to traditional methods in some cases. Digital payments are now "firmly grounded in trust and security" thanks to the implementation of multi-factor authentication (MFA) and real-time fraud monitoring (Bangko Sentral ng Pilipinas, 2025).

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The first statement yielded a mean score of 3.789, indicating that the majority of participants agreed that their account information and other confidential data were protected through embedded security controls in digital banking systems. This suggested that respondents trusted the security mechanisms implemented by digital banking providers to safeguard sensitive information.

The second statement also obtained a mean score of 3.789, reflecting respondents' confidence in the security of their money when using digital banking services. This finding indicated that participants believed the security protocols of digital banking platforms were adequate in protecting their financial assets.

The third statement recorded a mean score of 3.716, suggesting that respondents agreed that financial transactions conducted online were more secure than those performed through traditional banking methods. This implied that participants perceived digital banking as a relatively secure option for conducting financial transactions.

The fourth statement received a mean score of 3.652, indicating that respondents believed that logical access management systems in digital banking ensured the security of their bank accounts. This finding suggested confidence in the access control measures implemented by digital banking providers.
The fifth statement yielded a mean score of 3.593, indicating that respondents prioritized privacy over convenience in the context of mobile banking. This suggested that participants valued the protection of personal and financial information and considered privacy an essential factor in their perception of digital banking security.

Test of Significance of the Relationship Between the Personal and Usage Profiles and Their Level of Digital Banking Usage

This section presents the test of significance on the relationship between the personal profile and digital transaction usage profile of the respondents and their level of digital banking usage. Through appropriate statistical analysis, the study examines whether variables such as age, gender, educational attainment, internet access frequency, online purchasing behavior, and transaction patterns are significantly associated with the extent of digital banking use. The results provide empirical evidence on whether demographic and behavioral characteristics influence the adoption and utilization of digital financial services among senior citizens.

Table 19
Correlation between digital transaction usage profile and their perceived behavioral factors towards mobile banking

Usage Transaction	Perceived Usefulness	Perceived Ease of Use	Acceptability	TRUST	SECURITY
Frequency Access to the Internet	.164	.416	.041	.446	.102
Frequency of Online Purchase	.001	.002	.000	.003	.000
Frequency of Paying Online	.000	.000	.000	.006	.000
Average Expenditures Per Purchase Transaction	.000	.000	.000	.000	.000
Average Amount Per Payment Transaction	.000	.000	.000	.000	.000
* Correlation is significant at the 0.05 level					

The results indicated that there was a statistically significant correlation between the frequency of access to the internet and the level of mobile banking acceptability, with a p-value of .041. However, there was no significant correlation between frequency of internet access and the level of mobile banking usage in terms of perceived usefulness, ease of use, trust, and security, as reflected by p-values of .164, .416, .446, and .102, respectively.

Furthermore, the findings revealed a statistically significant correlation between the frequency of online purchases and the level of mobile banking usage, with p-values of .001, .002, .000, .003, and .000 across the measured dimensions. Similarly, there was a significant correlation between the frequency of paying online and the level of mobile banking usage, with p-values of .000, .000, .000, .006, and .000, respectively.

In addition, the results showed a statistically significant correlation between average expenditures per purchase transaction and the level of digital banking usage, with p-values of .000 across all behavioral dimensions. Likewise, a

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significant correlation was found between the amount per payment transaction and the level of digital banking usage, with p-values of .000 in all measured categories.

The findings suggested that respondents who accessed the internet more frequently were more likely to demonstrate higher acceptability of mobile banking services. However, internet access frequency did not significantly influence perceptions of usefulness, ease of use, trust, and security. Moreover, respondents who engaged more frequently in online purchasing and online payment activities were more likely to report higher levels of digital banking usage. More frequent internet access and a richer internet experience are associated with higher acceptance and intention to adopt mobile payments, as prior internet experience enhances readiness to conduct financial activities digitally (Su, Wang, and Yan, 2018). Similarly, higher transaction amounts and greater average expenditures per purchase were associated with increased digital banking utilization. These results indicated that actual transactional behavior and financial engagement were significantly related to digital banking usage levels among the respondents.

Test of Significance of The Relationship Between the Perceived Behavioral Factors And The Digital Banking Usage Of The Respondents

This section presents the test of significance of the relationship between the perceived behavioral factors—namely perceived usefulness, perceived ease of use, acceptability, trust, and security—and the level of digital banking usage among the respondents. Using appropriate statistical measures, the study determines whether these perceptual constructs significantly influence or are associated with the respondents' actual engagement in digital financial transactions. The results provide empirical support for the theoretical framework of technology acceptance and help explain how attitudinal factors translate into digital banking behavior among senior citizens.

Table 20
Correlation between digital transaction usage profile and their Level of digital banking usage

	Digital Transaction Usage Profile				
Digital Banking Usage	**Frequency Access to the Internet**	**Frequency of Online Purchase**	**Frequency of Paying Online**	**Average Expenditures Per Purchase Transaction**	**Average Amount Per Payment Transaction**
Perceived Level of Digital Banking Usage	.001	.000	.000	.000	.000
* Correlation is significant at the 0.05 level					

The results indicated that there was a statistically significant correlation between the digital transaction usage profile and the perceived level of digital banking use. This finding suggested that respondents' patterns of digital transaction behavior were significantly associated with their perceived level of digital banking usage. Patterns of online transaction behavior influence users' overall perceptions and usage levels of digital banking services, with users who engage more intensively in digital payments and e-commerce reporting higher adoption rates and greater perceived engagement with banking technologies (Reyes & Santos, 2023). It further indicated that variations in transaction frequency and spending behavior were related to differences in perceived engagement with digital banking services. These results demonstrated that actual transactional practices were linked to how respondents evaluated and perceived their use of digital banking platforms.

CONCLUSIONS

Based on the foregoing findings, it can be concluded that senior citizens in the study population generally hold favorable cognitive and attitudinal perceptions toward digital banking, particularly in terms of perceived usefulness, perceived ease of use, acceptability, trust, and security. This finding supports the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh et al. (2003), which posits that individuals are more likely to adopt a technology when they perceive it as useful and easy to use. The positive ratings across these constructs affirm that the core determinants of UTAUT remain applicable even among older adult populations.

However, despite these favorable perceptions, a clear perception–behavior gap exists, as actual usage behaviors remain low in terms of internet access, online purchasing, and online payments. This partially deviates from the assumptions of UTAUT, which suggests that positive perceptions should translate into actual usage. The findings indicate that, in

the case of senior citizens, perception alone is insufficient to drive adoption, and that additional factors such as digital literacy, access to the internet, and habitual reliance on traditional banking methods significantly influence behavior.

The results also reveal that device ownership is not the primary barrier to adoption, but rather limited exposure, lack of practical experience, and inconsistent connectivity. This extends the application of UTAUT by emphasizing the importance of facilitating conditions, particularly in populations with lower digital familiarity. It suggests that for senior citizens, the presence of resources must be complemented with guided experience and skill development to translate intention into actual usage.

Furthermore, the findings support the Protection Motivation Theory (PMT) by demonstrating that trust and security play a crucial role in influencing digital banking usage. While respondents reported relatively high levels of perceived trust and security, the persistence of low actual usage suggests that seniors may still experience underlying concerns about risk and vulnerability. This aligns with PMT, which explains that individuals may avoid engaging in behaviors they perceive as risky unless they feel adequately equipped to cope with potential threats.

Additionally, the significant relationship between actual transaction behavior and behavioral determinants reinforces both UTAUT and PMT. Increased exposure to digital transactions was associated with higher levels of perceived usefulness, ease of use, trust, and acceptability, indicating that experience strengthens both perception and confidence. This supports the idea that behavioral reinforcement and repeated interaction with technology can reduce perceived risk and improve adoption.

Overall, the findings confirm that while the theoretical frameworks of UTAUT and PMT are valid in explaining digital banking behavior among senior citizens, they must be contextualized within the realities of aging populations. Specifically, the results highlight that skill-based capability, guided exposure, and confidence-building interventions are necessary to bridge the gap between positive perception and actual usage.

Therefore, the study provides strong justification for the development of a digital financial inclusion short course that goes beyond awareness and focuses on hands-on learning, trust-building, and risk management. Such an intervention directly addresses the limitations identified in the study and aligns with both theoretical frameworks by strengthening facilitating conditions and reducing perceived threats, ultimately promoting greater adoption of digital banking among senior citizens. This study also contributes to the advancement of the Sustainable Development Goals, particularly in promoting financial inclusion and reducing inequalities among vulnerable populations. By addressing the digital divide among senior citizens, the study supports inclusive access to financial technologies and sustainable economic participation.

Recommendations

Based on the findings and conclusions of the study, it is recommended that a Digital Financial Inclusion Short Course for Senior Citizens be developed and implemented. The course should focus on enhancing digital banking literacy, usability, trust, and security among senior citizens.

Specifically, the program should include guided hands-on training on the use of mobile banking and e-wallet applications, step-by-step transaction simulations, and practical exercises on online payments and fund transfers. It should also incorporate essential topics such as fraud awareness, scam prevention, password management, and data privacy to address concerns related to trust and security.

Furthermore, the course should adopt a simple, user-friendly, and demonstration-based approach, allowing senior citizens to learn at their own pace and gradually build confidence through actual digital banking practice. The proposed Digital Financial Inclusion Short Course also supports the achievement of the Sustainable Development Goals by promoting inclusive access to digital financial services among senior citizens.

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