

# Digital Banking Adoption in Semi Urban Setting: A Behavioral Analysis of Bank Clients in Antipolo City

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## ABSTRACT

This study examined the behavioral factors influencing digital banking adoption among bank clients in selected semi-urban barangays of Antipolo City. Anchored on the modified unified theory of acceptance and use of technology 2 (UTAUT2), the research incorporated two additional constructs: trust and perceived risk to better capture localized behavioral dynamics. A quantitative descriptive-correlational research design was employed, involving 404 respondents selected through stratified sampling. Data was gathered using structured online questionnaires and analyzed through JAMOVI software using various relevant inferential statistics such as Pearson r coefficient, linear regression, and analysis of variance (ANOVA). Results revealed that effort expectancy, trust, and performance expectancy were the strongest predictors of behavioral intention to adopt digital banking, while perceived risk exhibited a slight but negative influence. Demographic factors such as age, income, and education significantly affected adoption levels, whereas years of digital banking experience did not. Findings indicate that user-friendly systems, data security, and perceived utility enhance digital banking acceptance in semi-urban areas. Therefore, this study concludes that technology adoption is behaviorally influenced by convenience, efficiency, society, stable digital infrastructure, trust, and minimized risks. A community-based development plan is proposed to promote inclusive digital banking practices through education and infrastructure support. The results contribute to the growing body of knowledge on financial technology adoption in developing economies and provide practical insights for banks, policymakers, and fintech developers aiming to enhance digital financial inclusion in the Philippines.

**Keywords:** Digital banking, behavioral intention, trust, perceived risk, UTAUT2, 113 financial inclusion, semi-urban

## INTRODUCTION

The growth of digital banking has transformed how financial tasks were handled, making them more convenient, quicker, and easier to access. In the Philippines, the banking industry had shifted significantly toward digital solutions, especially during and after the COVID-19 pandemic (Bangko Sentral ng Pilipinas, 2022). A study by Cruz and Mendoza (2021) pointed out that the increasing use of smartphones and improved mobile internet access, even in non-metro areas, had played a big role in making digital banking more popular. This trend had also been supported by government-driven financial inclusion initiatives and progress in financial technology (fintech) (Asian Development Bank, 2020).

According to the World Bank's 2020 research, the Philippines was one of Southeast Asia's fastest growing digital economies. However, there were still differences in how widely digital financial services were used across regions. For instance, while 51% of Filipino adults had made or had received a digital payment in the past year, there was a noticeable gap between urban and rural or semi-urban areas, as was reported by the Global Findex Database (Demirguc-Kunt et al., 2022). People's willingness to adopt digital banking depended on factors like how useful they found its features, their trust in digital systems, and their level of digital skills (OECD, 2021). This study investigated the behaviors that influenced how customers in Antipolo City adopted digital banking. It focused on the main reasons people chose to use digital banking, the obstacles they faced, and their overall views on the service. By understanding these factors, the research aimed to give a clear picture of what encouraged or stopped people from using digital banking in

semi-urban areas. The results should have helped create better strategies to increase access to digital financial services and make digital banking more accepted in similar communities.

## Theoretical Framework

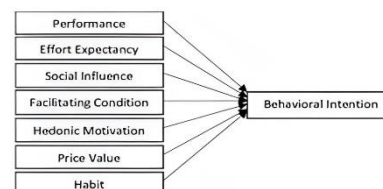


Figure 1. UTAUT2 Model

This study was built on Venkatesh, Thong, and Xu's (2012) unified theory of acceptance and use of technology 2, or UTAUT2. It was an updated version of the original UTAUT model from 2003, which combined ideas from earlier theories like the innovation diffusion theory, the technology acceptance model, and the theory of reasoned action. The unified theory of acceptance and use of technology 2 used seven key factors to explain why people adopted technology: Performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit. These factors directly affect a person's intention to use technology. However, age, gender, and experience could influence how people actually used it, and this behavior was shaped by both the

intention and the availability of supporting conditions. For this study, the framework was adjusted to better fit the semi-urban context in the Philippines. Two new factors, trust and perceived risk, were added, while three original elements hedonic motivation, price value, and habit were removed. These variables were important in the adoption of financial services.

### Literature Review

Recent advancements in digital banking have intensified scholarly interest in customer experience across diverse cultural and infrastructural contexts. Li-Chen et al. (2023) conducted a comparative study on digital banking services in South Korea and the Philippines, employing a novel mixed-method approach that combined data mining techniques with customer journey mapping. The study demonstrated that there were four main factors that affected how a customer felt: the amount of service touchpoints, the rate of service delivery, the difficulty of registration, and the range of interactions with the customer. These elements were essential for comprehending how users interacted with digital banking platforms across national borders. They also shed light on the obstacles that affect adoption and consumer satisfaction. Particularly in markets with differing degrees of technology infrastructure and customer expectations, the study underlined the significance of contextualized service design. However, Calderon (2024) investigated how digital payment systems might improve the efficacy and efficiency of financial transactions, especially in the context of corporate operations. Key performance metrics such as transaction speed, cost, frequency, error rate, and overall user satisfaction were all assessed in this study. The study showed notable benefits, including a 7% increase in transaction speed, a 50% cost reduction, a 150% increase in transaction frequency, and an 80% mistake reduction, through a mixed-method approach that combined quantitative analysis of 47 organizations with qualitative case studies. Ramsundra, Mason, and Dobbstein (2025) investigated how various demographic factors shape consumer perceptions and usage of digital personal banking in South Africa. Their study, conducted in the iLembe district of KwaZulu-Natal with a sample of 400 bank account holders, focused on age, gender, education, and income. Vani (2022) investigated the effectiveness of digital banking units (DBUs) in promoting digital financial inclusion among rural populations in India. Digital banking units were introduced as a strategic initiative to expand banking access in underserved areas through digital infrastructure. Her study, which gathered primary data from 200 rural respondents and used SPSS-based analysis, revealed that although many customers were still dependent on face-to-face branch banking, there was a growing openness to digital banking services influenced by factors such as digital literacy, occupation, education level, and prior experience with mobile or internet banking. However, Shakir (2024) showed how important data confidentiality laws were in determining how much trust customers had in online banking systems. Data misuse, identity theft, and online fraud continued to be major concerns as digital banking became increasingly embedded in daily financial behavior. Apau, Elzbieta, and Singh (2025) provided a better way to understand why people adopted mobile banking by expanding the unified theory of acceptance and use of technology 2 (UTAUT2) with four new ideas: security, risk, institutional trust, and technology trust. They used covariance-based structural equation modeling (CB-SEM) on data from 315 mobile banking users. Their findings showed that most of the original UTAUT2 factors still applied in the mobile banking context. However, the new factors had a big impact on users' intentions to use mobile banking and their actual usage, except for perceived risk. Wang et al. (2024) provided a timely exploration of how digital transformation through technologies such as artificial intelligence, blockchain, big data analytics, and cloud computing had reshaped the banking industry while simultaneously heightening data privacy and cybersecurity challenges. Their study highlighted the tension between innovation and risk, especially as banks struggled to integrate legacy systems with modern solutions, manage third party vendor risks, and maintain compliance amidst evolving regulation.

The unified theory of acceptance and use of technology 2 (UTAUT2) is the basis for this research. This study modifies the theory to fit the situation of adopting digital banking in a semi urban area in the Philippines. The original UTAUT2 includes factors like performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit. However, some of these factors were not very relevant in this setting. So, three of them, hedonic motivation, price value, and habit were removed. To better understand the key factors affecting people's use of financial technology, two new factors were added: perceived risk and trust. In the updated model, performance expectancy, Effort expectancy, social influence, facilitating conditions, Trust, and perceived risk were the main factors that influenced the intention to adopt digital banking. In this modified frame, demographic characteristics were integrated to assess how they influence the changes in one's behavioral intention within the context of digital mobile banking usage among semi urban populace. Their inclusion in the model signifies a research goal that aims to investigate the demographic role of age, sex, education, income, occupation, frequency of usage, and years of using the said technology. To fill these gaps, the study offered useful suggestions for financial institutions, legislators, and local leaders to promote the adoption of digital banking in an inclusive manner. It also added to the scholarly conversation.

### METHODS

This study used a quantitative descriptive-correlational research design. This approach was suitable because the study aimed to measure and describe how people perceived various behavioral factors that influenced their decision to adopt digital banking, as well as to explore the relationships between these factors and their intention to use digital banking. The study was conducted in four semi-urban Barangays of Antipolo City, Rizal Province. The study focused on residents living in these locations who are at least 18 years old and were users of digital banking services.

The main research instrument was a structured survey questionnaire designed based on the adapted UTAUT2 model. There were three major sections to this study. Age, gender, education level, monthly income, occupation, frequency of use, and years of experience with digital banking were among the demographics of the respondents that were the subject of Section A, which addresses the first research question. Important behavioral traits that could affect the uptake of digital banking were examined in Section B. Perceived risk (PR), effort expectancy (EE), social influence (SI), facilitating conditions (FC), performance expectancy (PE), and trust (T) were the six independents. A 5-point Likert scale was used to rate the assertions, with 1 denoting "strongly disagree" and 5 denoting "strongly agree." I opted for a structured research instrument instead of adopting existing publications to ensure utmost alignment with the research goals of this paper.

### RESULTS

**Table 1. Population Data per Barangay in Antipolo City**

Barangay	Population
Dalig	58,598
San Luis	66,351
San Roque	70,120
Dela Paz	77,207
<b>Total</b>	<b>272,276</b>

Source. Adapted from Philippine Statistics Authority (PSA), latest available census data

The study population comprised 272,276 individuals, focusing on residents aged 18 years and above in the specified locations who use digital banking services.

**Table 2. Interpretation Scale for Cronbach's Alpha**

Cronbach's Alpha	Internal Consistency
0.90 and above	Excellent
0.80 – 0.89	Good
0.70 – 0.79	Acceptable
0.60 – 0.69	Questionable
0.50 – 0.59	Poor
Below 0.50	Unacceptable

Note: The interpretation scale for Cronbach's alpha was based on the guidelines of George and Mallery (2003, as cited in Saidi & Siew, 2019).

**Table 3. Summary of Cronbach's Alpha Scores**

Construct	Cronbach's Alpha	Remark
Performance Expectancy	0.9126	Excellent
Effort Expectancy	0.7135	Acceptable
Social Influence	0.8857	Good
Facilitating Conditions	0.9222	Excellent
Trust	0.9452	Excellent
Perceived Risks	0.8944	Good
Behavioral Intention	0.7658	Acceptable

**Table 4. Demographic Profile of the Respondents (N = 404)**

Age	Frequency	Percentage (%)
-	16	4
18–24 years old	129	31.9
25–34 years old	128	31.7
35–44 years old	60	14.9
45–54 years old	49	12.1
55–64 years old	22	5.4
<b>Total</b>	<b>404</b>	<b>100</b>
Sex	Frequency	Percentage (%)
Male	139	34.4
Female	214	53.1
Prefer not to say	51	12.5
<b>Total</b>	<b>404</b>	<b>100</b>
Educational Level	Frequency	Percentage (%)
Some Elementary	5	1.2
Elementary Graduate	20	5
Some High School	77	19.1
High School Graduate	113	28
Some College	155	38.4
Bachelor's Degree	20	5
Master's Degree	14	3.5
<b>Total</b>	<b>404</b>	<b>100</b>
Income Bracket	Frequency	Percentage (%)
Less than Php10,000	107	26.4
Php 30,000–49,999	233	57.6
Php 50,000–69,999	32	7.9
More than Php 70,000	32	7.9
<b>Total</b>	<b>404</b>	<b>100</b>
Occupation	Frequency	Percentage (%)
Student	67	16.6
Employed (Full-time)	197	48.8
Employed (Part-time)	57	14.1
Self-employed	53	14.1
Unemployed	12	3
Retired	12	3
Other	6	1.5
<b>Total</b>	<b>404</b>	<b>100</b>
Digital Banking Usage	Frequency	Percentage (%)
Daily	153	37.9
Weekly	117	29
Monthly	69	17.1
Occasionally	41	10.1
Rarely	24	5.9
<b>Total</b>	<b>404</b>	<b>100</b>
Years of Usage	Frequency	Percentage (%)
Less than 1 year	63	15.6
1–2 years	64	15.8
3–5 years	129	31.9
More than 5 years	148	36.6
<b>Total</b>	<b>404</b>	<b>100</b>

The findings indicate that most digital banking users in Antipolo are young and middle-income individuals, suggesting higher adaptability to digital financial systems. This supports the findings of Ramsundra et al. (2025), who noted that younger and more educated individuals are more likely to adopt digital financial services. Similarly, Vani (2022) emphasized that education and access to digital infrastructure influence digital readiness in semi-urban areas. The high proportion of employed users also aligns with Orenca's (2023) assertion that economic stability and employment exposure enhance familiarity with digital transactions.

**Table 5. Assessment of Different Factors Related to Digital Banking Adoption (Performance Expectancy)**

Statement	Mean	SD	Interpretation
Digital banking enhances productivity in financial transactions.	3.78	1.34	Agree
Digital banking is more convenient than traveling to the nearest bank branch or ATM.	3.7	1.39	Agree
Using digital banking improves the effectiveness of financial management.	3.6	1.28	Agree
Digital banking helps me avoid long queues in physical bank branches in Antipolo.	3.69	1.35	Agree
Digital banking allows me to manage my finances despite limited banking facilities in my area.	3.54	1.39	Agree
<b>Composite Mean</b>	<b>3.66</b>	<b>1.35</b>	<b>Agree</b>

Performance Expectancy emerged as the most significant construct, obtaining the highest mean score among all variables, which indicates that respondents strongly perceive digital banking as a highly beneficial and efficient financial tool. This finding suggests that users believe digital banking platforms enhance the speed, convenience, and overall effectiveness of financial transactions compared to traditional, branch-based banking services.

**Table 6. Assessment of Different Factors Related to Digital Banking Adoption (Effort Expectancy)**

Statement	Mean	SD	Interpretation
Digital banking is easy to use even with limited internet or mobile data availability.	3.39	1.44	Agree
The steps in digital banking transactions are clear and understandable, even for first-time users in my community.	3.49	1.24	Agree
Digital banking saves time in completing transactions.	3.56	1.4	Agree
The experience of using digital banking is highly satisfying.	3.66	1.31	Agree
I find it simple to adapt to digital banking.	3.61	1.36	Agree
<b>Composite Mean</b>	<b>3.54</b>	<b>1.36</b>	<b>Agree</b>

The respondents in this table generally agree that digital banking applications are easy to learn, navigate, and operate, which reduces the complexity often associated with financial technologies. This suggests that intuitive design, simplified transaction procedures, and user-friendly interfaces contribute significantly to user satisfaction and engagement. The result supports the findings of Apau et al. (2025), who emphasized that ease of use is a strong determinant of behavioral intention to adopt mobile banking.

**Table 7. Assessment of Different Factors Related to Digital Banking Adoption (Social Influence)**

Statement	Mean	SD	Interpretation
My family and neighbors encourage me to use digital banking instead of cash transactions.	3.5	1.38	Agree
There is a sense of pride when others follow the recommendation to use the same digital bank.	3.44	1.32	Agree
Not using the latest digital banking services feels like falling behind.	3.41	1.27	Agree
Recommendations from peers strongly influence which digital bank I try.	3.51	1.34	Agree
I feel pressured to keep up when others in my community adopt digital banking.	3.27	1.34	Neither Agree nor Disagree
<b>Composite Mean</b>	<b>3.42</b>	<b>1.33</b>	<b>Agree</b>

Social Influence received a moderate mean score, indicating that the opinions and behaviors of peers, family members, and social networks have a noticeable but not dominant impact on respondents' decisions to use digital banking. This suggests that while individuals may consider recommendations and experiences shared by others, their final decision is still largely based on personal evaluation of the technology's benefits and usability. The finding aligns with Chigori et al. (2020), who noted that social factors can encourage fintech adoption, particularly among first-time users, but may diminish in importance as users gain personal experience with the technology. In the context of this study, the moderate influence implies that social endorsement serves as a supplementary factor rather than a primary motivator, reinforcing the idea that individual perceptions of performance and effort are more

more critical in driving adoption.

**Table 8. Assessment of Different Factors Related to Digital Banking Adoption (Facilitating Conditions)**

Statement	Mean	SD	Interpretation
The information and assistance needed to use digital banking are readily available.	3.5	1.37	Agree
Digital banking can be accessed across multiple devices and systems.	3.45	1.31	Agree
Digital banking provides adequate support when needed.	3.31	1.33	Neither Agree nor Disagree
Digital banking offers sufficient training or guidance for users.	3.35	1.32	Neither Agree nor Disagree
Mobile data or Wi-Fi in Antipolo is reliable enough for digital banking.	3.42	1.35	Agree
<b>Composite Mean</b>	<b>3.41</b>	<b>1.34</b>	<b>Agree</b>

Facilitating Conditions also recorded a moderate rating, underscoring the importance of external resources and support systems in enabling the effective use of digital banking services. Respondents acknowledge that access to reliable internet connectivity, compatible devices, and technical assistance significantly affects their ability to use digital platforms efficiently

**Table 9. Assessment of Different Factors Related to Digital Banking Adoption (Trust)**

Statement	Mean	SD	Interpretation
I will continue using digital banking even if traditional banking remains more common in Antipolo.	3.51	1.39	Agree
I trust digital banks even though many residents in my area still prefer face-to-face transactions.	3.35	1.33	Neither Agree nor Disagree
Digital banking will be reused by me for various purposes.	3.49	1.28	Agree
I am confident that my money is safe in digital banking despite reports of scams in semi-urban communities.	3.41	1.35	Agree
There is a willingness to recommend digital banking due to satisfaction.	3.55	1.32	Agree
<b>Composite Mean</b>	<b>3.46</b>	<b>1.34</b>	<b>Agree</b>

The positive perception of trust is essential, as financial transactions inherently involve high levels of risk and sensitivity. This finding is consistent with Shakir (2024), who emphasized that enhanced cybersecurity measures significantly contribute to building user trust in digital platforms.

In this study, the favorable rating of trust implies that respondents are more willing to engage with digital banking services when they feel assured of system security, highlighting the importance of maintaining robust and transparent security practices.

**Table 10. Assessment of Different Factors Related to Digital Banking Adoption (Perceived Risk)**

Statement	Mean	SD	Interpretation
Using digital banking ensures the security of personal data.	3.56	1.32	Agree
Digital banking has transparent and reliable privacy policies.	3.4	1.31	Agree
I believe digital banks must earn trust in semi-urban areas where people are used to physical proof of transactions.	3.3	1.32	Neither Agree nor Disagree
There are no technical issues disrupting digital banking usage.	3.3	1.32	Neither Agree nor Disagree
<b>Composite Mean</b>	<b>3.39</b>	<b>1.32</b>	<b>Agree</b>

This dual perception indicates that users are balancing their trust in digital systems with an awareness of possible vulnerabilities. The finding aligns with Wang et al. (2024), who noted that users often simultaneously exhibit trust and concern when engaging with digital financial technologies. From a research perspective, this suggests that perceived risk does not necessarily prevent adoption but may influence the degree of usage and user confidence

**Table 11. Assessment of Behavioral Intention to Adopt Digital Banking**

Statement	Mean	SD	Interpretation
If I am given the opportunity, I intend to use digital banking.	3.65	1.28	Agree
I am planning to use digital banking in the future.	3.63	1.24	Agree
I intend to use digital banking continuously.	3.60	1.22	Agree
I am open to using digital banking indefinitely.	3.49	1.31	Agree
I recommend the use of digital banking to others.	3.62	1.23	Agree
<b>Composite Mean</b>	<b>3.60</b>	<b>1.26</b>	<b>Agree</b>

The table reveals that respondents consistently demonstrate agreement to all the indicators enumerated under the intention variable with low standard deviation, suggesting minimal deviation from each other's assessment. They intend and plan on using digital banking in the years to come, while underscoring their openness and commitment to using the said technology continuously

## Proposed Community-Based Digital Banking Development Plan

### Barangay Digital Literacy Training

The Barangay Digital Literacy Training program aims to enhance residents' knowledge and confidence in using digital banking platforms. The program will involve conducting four barangay-level training sessions focused on the use of mobile banking applications. Participants will also receive hands-on tutorials on secure online transactions, account registration, and fraud detection. To further support learning, educational materials and quick-reference guides will be distributed to residents. The initiative will be implemented in partnership with the Local Government Unit (LGU) of Antipolo, partner banks such as BDO and RCBC, and barangay officials. The program is expected to run for four months, covering one barangay per month, with an estimated budget of PHP 200,000. The budget will cover venue expenses, training materials, trainer honoraria, snacks, and Wi-Fi support.

### Digital Trust and Cybersecurity Awareness Campaign

The Digital Trust and Cybersecurity Awareness Campaign seeks to strengthen public confidence in digital banking by addressing concerns related to privacy, cybersecurity, and fraud. As part of the initiative, a "Safe Digital Finance Week" will be launched in each barangay. Seminars will be conducted on topics such as data privacy, scam prevention, and secure password practices. Informational brochures and posters will also be distributed to increase public awareness. The program will involve collaboration among the Bangko Sentral ng Pilipinas (BSP), the LGU of Antipolo, bank CSR teams, and barangay councils. The campaign is expected to last for two months with an estimated budget of PHP 120,000, which will cover materials, speakers' fees, and logistical expenses.

### Financial Literacy and Inclusion Seminar

The Financial Literacy and Inclusion Seminar aims to promote responsible money management and encourage safe digital banking practices while integrating financial education with local livelihood programs. The program will conduct quarterly workshops focusing on budgeting, savings, e-payments, and fraud prevention. Participants will also receive practical demonstrations on the use of digital wallets and online payment systems. In addition, open forums will be facilitated to address participants' questions and concerns regarding digital finance. The initiative will be implemented in partnership with the Department of Trade and Industry (DTI), the Department of Education (DepEd), the LGU, and partner banks. The seminars will be conducted quarterly within the pilot period and will require an estimated budget of PHP 160,000. The budget allocation will include venue expenses, speakers, participant kits, and instructional materials.

### Community Partnership and Monitoring Program

The Community Partnership and Monitoring Program is designed to

evaluate the effectiveness and sustainability of digital financial inclusion initiatives within the community. The program will involve the formation of a Barangay Digital Committee in each area to oversee implementation and monitoring efforts. Quarterly monitoring and feedback sessions will be conducted to assess progress and identify areas for improvement. Evaluation and progress reports will also be prepared and submitted regularly to ensure accountability and program sustainability. The initiative will be implemented through the collaboration of the LGU of Antipolo, barangay digital committees, and bank partners. The program is expected to run for six months with an estimated budget of PHP 100,000. The budget will cover monitoring tools, meetings, documentation, and report preparation expenses.

A total of 404 respondents from the barangays of Dalig, San Luis, San Roque, and Dela Paz in Antipolo City participated in the survey. Most respondents were between 18 and 34 years old, followed by those aged 35 to 44, indicating that digital banking users in the area are predominantly young adults. The majority were female, college-educated, and employed full-time, with monthly incomes ranging from ₱30,000 to ₱49,999. Many respondents had been using digital banking services for five years or more, and a significant portion reported using them daily or frequently. These findings suggest that digital banking adoption in Antipolo is largely driven by younger and middle-income individuals, who are generally more adaptable to digital technologies. This supports the findings of Ramsundra et al. (2025), who reported that younger and more educated individuals are more likely to adopt digital financial services. Similarly, Vani (2022) emphasized that educational attainment and access to digital infrastructure influence digital readiness in semi-urban areas. The high proportion of employed respondents also supports Orenca's (2023) claim that economic stability and workplace exposure increase familiarity with digital transactions. Among the six constructs, Performance Expectancy obtained the highest mean score, indicating that respondents strongly believe digital banking improves transaction efficiency and convenience compared to visiting traditional bank branches. This finding aligns with Calderon (2024), who reported that digital payment systems significantly enhance transaction speed and cost efficiency.

Effort Expectancy ranked second, highlighting that ease of use and simple transaction processes encourage continued use of digital banking platforms. This result supports Apau et al. (2025), who identified usability as a key predictor of mobile banking adoption. Meanwhile, Social Influence and Facilitating Conditions received moderate scores, suggesting that peer recommendations, reliable internet connectivity, and technical support contribute to users' willingness to adopt financial technologies. These findings are consistent with studies by Chigori et al. (2020) and Vani (2022). Lastly, respondents reported positive perceptions of Trust and manageable levels of Perceived Risk, indicating confidence in current security and privacy measures while remaining cautious about potential fraud. This aligns with the findings of Shakir (2024) and Wang et al. (2024), who emphasized that trust and risk perception significantly influence digital banking adoption. Based on the findings, a six-month pilot program is proposed to promote digital banking adoption in the selected barangays of Antipolo City. The initiative will be presented to the Antipolo City Local Government, particularly the City Information and Communications Technology (ICT) Office and the City Economic Development Office, in partnership with the barangay councils of Dalig, San Roque, San Luis, and Dela Paz. Similarly, RCBC's DiskarTech Digital Financial Inclusion Program conducts community seminars and digital caravans in semi-urban areas with estimated costs ranging from ₱40,000 to ₱60,000 per event, including staff mobilization, campaign materials, and ICT support.

These established programs provide credible cost references, supporting the feasibility and realism of the proposed ₱700,000 budget for the community-based digital banking adoption initiative.

The results verify behavioral and cognitive characteristics, including the perceived usability, trustworthiness, and convenience of use of digital banking systems, are the main determinants of digital banking adoption in Antipolo City. These findings support the unified theory of acceptance and use of technology 2 (UTAUT2) and highlight how important it is to incorporate perceived risk and trust to contextualize behavioral elements in the Philippine context. The results suggest that customers are more satisfied and are more likely to stick with digital banking services when they are digitally educated and the technology used by banks is sophisticated. In order to accommodate different literacy levels, banks should give priority to enhancing user interfaces, streamlining app navigation, and offering multilingual support, as effort expectancy is the best predictor. To address persistent worries about fraud and identity theft, trust is also essential, highlighting the necessity of rigorous adherence to the Data Privacy Act of 2012, open communication, and more robust cybersecurity measures. According to the influence of social and enabling factors, local collaborations and community-based awareness campaigns can aid in normalizing the acceptance of digital banking in semi-urban areas. All seven hypotheses (H1–H7) were statistically tested and the null hypotheses were rejected. H1–H6 confirm that the behavioral constructs under the extended UTAUT2 framework significantly affect Behavioral Intention to adopt digital banking. H7 indicates that demographic characteristics (particularly age, gender, education, income, and occupation) significantly influence adoption behavior —meaning that user intention differs across demographic segments.

These findings affirm that digital banking adoption in Antipolo City is shaped not only by technological factors but also by socio-demographic and trust-related factors, supporting prior studies such as Vani (2022) and Orenca (2023) in the Philippine context. Based on the study's findings, a Community-Based Digital Banking Development Plan is suggested to increase semi-urban Antipolo City inhabitants' knowledge, confidence, and behavioral adoption of digital banking.

Overall, the results indicate that while demographic factors shape individual adoption, behavioral construct rooted in usability and trust are the most powerful determinants. This finding reinforces the growing role of digital banking as a bridge to financial inclusion and economic participation among semi-urban Filipinos. In response to these findings, a community-based digital banking improvement plan was developed, focusing on digital literacy, trust and security education, and local partnerships between banks and Barangays to enhance digital inclusion in semi-urban areas. This development plan will be formally offered to the local government of Antipolo City, specifically through the City Information and Communications Technology (ICT) Office and the City Economic Development Office, in partnership with the Barangay Councils of Dalig, San Roque, San Luis, and Dela Paz. The plan will also be presented to partner banks, particularly BDO, RCBC, and GCash, and the Bangko Sentral ng Pilipinas (BSP) as potential implementing collaborators under the digital payments transformation roadmap (2023–2026). This six-month pilot program's overall budget of ₱700,000 was determined by benchmarking it against the BDO Foundation's and RCBC's current financial literacy and inclusion programs, as well as current local cost standards. The average expense of each event, covering trainer charges, materials, and logistics, is between ₱30,000 and ₱50,000. At an estimated cost of ₱40,000 to ₱60,000 each event, RCBC's DiskarTech Digital Financial Inclusion Program also organizes community seminars and on-ground caravans throughout semi-urban areas. This program covers staff mobilization, campaign materials, and ICT support. These established programs serve as credible cost references that validate the proposed ₱700,000 budget estimate equivalent to approximately ₱175,000 per barangay as a feasible, realistic, and consistent figure with current community-based

financial inclusion and digital literacy initiatives implemented in the Philippines.

## DISCUSSION

This study entitled, "Digital Banking Adoption in Semi Urban Setting: A Behavioral Analysis of Bank Clients in Antipolo City " looked at the behavioral characteristics that affect citizens' acceptance of digital banking in a few Antipolo City Barangays. The study, which was based on the unified theory of acceptance and utilization of technology 2 (UTAUT2) and expanded with the concepts of perceived risk and trust, aimed to ascertain how these factors influence consumers' behavioral intentions to utilize Internet banking services. To conduct a quantitative-descriptive study, 404 respondents were given a validated survey questionnaire. JAMOVI was used to encode and analyze the data, and the primary analytical tool was Structural Equation Modelling (SEM). SEM was selected due to its ability to examine several correlations between latent and observable variables at once, verifying the model's structural and measurement elements. Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Trust, and Perceived Risk were the six behavioral variables that were found to have a substantial impact on the behavioral intention to adopt digital banking. The strongest predictor among these was Effort Expectancy, suggesting that usability and design play a critical role in encouraging adoption. The considerable positive impacts of performance expectancy and trust further supported the idea that perceived utility and system dependability boost trust in online banking. On the other hand, Perceived Risk had a strong but unfavorable impact, demonstrating that worries about online fraud and data privacy continue to influence choices. The model demonstrated a good overall fit (CFI = 0.93, TLI = 0.92, RMSEA = 0.07) and explained 73% of the variance in Behavioral Intention, confirming the robustness of the extended UTAUT2 framework. Further analysis indicated that demographic variables such as age, gender, education, and income significantly influenced adoption behavior, while financial literacy and technological advancement positively impacted customer satisfaction and repeat usage. In response to these findings, a Community-Based Digital Banking

An Improvement Plan was developed, focusing on digital literacy, trust and security education, and local partnerships between banks and barangays to enhance digital inclusion in semi-urban areas.

Anchored on the key findings, digital banking has undoubtedly become predominantly popular among the populace in a semi-urban community in the Philippines, specifically in the City of Antipolo. Most of them engage in mobile banking for more than 5 years daily, indicating how this technology has been deeply embedded in their lives as they navigate through their savings, income, expenses, and other financial transactions. Their high adoption of digital banking was also reflected in other supplemental findings wherein the level of behavioral intention toward utilizing mobile banking services is reportedly high. High intention equates to their future commitment in the said technology, underscoring their preference for digital banking.

Key findings also revealed their assessment of various behavioral antecedents of digital banking. Its adoption is mainly rooted from perceived ease of use, convenience, and user's confidence, citing six (6) important reasons behind the sudden surge in its demand and acceptance in society. Performance and effort expectancy were among those cited as their motivation for engaging in digital banking. Users are more likely to support technology if it provides convenience, efficiency, and productivity in facilitating their financial

transactions. Based on the conclusion, the study recommends simplifying digital interfaces and mobile applications, ensuring functionality even under low bandwidth conditions typical in semi-urban settings. For customers, it is necessary to integrate digital banking in community cooperative and savings programs, allowing residents to manage group finances digitally to build familiarity and confidence. Lastly, for government, it is recommended to strengthen enforcement of the Data Privacy Act of 2012 (RA 10173) and enhancing compliance audits for banks and fintech firms. These government agencies must implement on-the-ground level of audit to ensure compliance by deploying competent agents that can evaluate the existing internal control and data management system of the banks so that they can assess how they store and process clients' information.

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