

Perception of Filipino Consumers towards Usage of All-Digital Banking

Paula Salvador & Isabel Beatrice Valenzuela

De La Salle University, Manila

paula_salvador@dlsu.edu.ph

isabel_valenzuela@dlsu.edu.ph

Abstract

The COVID-19 pandemic has accelerated the growth of digital banking in the Philippines. However, the country continues to be one of the countries in Asia with the lowest adoption of digital banking, with an estimated 71% unbanked adults and only 12% of adults who use mobile phones for financial transactions. This study sought to identify the factors that influence the usage of digital banks in the country using the Technology Acceptance Model extended with additional indicators such as perceived risk, trust, self-efficacy, and subjective norm. The participants were general Filipino consumers. A total of 80 individuals (57.5% females, 37.5% males, 5% LGBTQ+), aged 18 to 45 years old ($M = 25.275$ years, $SD = 5.68$) participated in the study. Results show that attitude, perceived usefulness, subjective norm, and trust are significant positive indicators of usage of digital banking apps, while perceived risk, and perceived ease of use, and self-efficacy are insignificant positive indicators. The findings suggest that it is important for consumers to see the app's usefulness and reliability and that other people including their peers, are using it. It is recommended that banks increase awareness of the benefits of their services, provide quality customer service and protection from cybercriminals.

Keywords: *Perception, Technology Acceptance Model, Intention, Digital Banking*

Introduction

Due to the COVID-19 pandemic, the digital banking industry's growth has continuously accelerated in the Philippines. Digital banks are defined as banks that offer "financial products and services that are processed end-to-end through a digital platform and electronic channels with no physical branch/sub-branch or branch-lite unit offering financial products and services" (BSP, 2020). Although this type of bank is required to have a head office in the Philippines, they do not have any physical branches for clients to avail of their services. Financial products like savings accounts, loans, and time deposits are mainly accessed via an app or a website.

Before the pandemic, a study showed that Filipino consumers prefer visiting the banks' branches to make payments. Out of all the countries they surveyed (New Zealand, Australia, Hong Kong, Malaysia, New Zealand, Singapore, Taiwan, and the Philippines), the Philippines emerged with the highest preference for visiting the branches, the only country to prefer branch than website visits. 17% of Filipino respondents prefer visiting the branch to view their account balance (Unisys, 2017) simply. Now that people's movements are limited because of the government's lockdown, more Filipinos are making online transactions, especially with digital banks. CIMB, one of the top digital banks in the Philippines, saw a 160% increase in cash-in for their app and foresaw a 500% growth by the end of 2020 (Markets Insider, 2020). The environment also paved the way for new digital bank players like Eastwest's Komo last May

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2020, Landbank's subsidiary, Overseas Filipino Bank last June 2020, and Tonik last March 2021. According to a 2020 study by Backbase Asia-Pacific Pte. Ltd and International Data Corp. (IDC) reported that in 5 years, 60% of Filipino consumers would be open to switching to digital-only banks, and the unbanked or underbanked segments are predicted to decrease by 20%.

With the growth of digital banks in the Philippines, providers of online-only financial services would have to increase trust of Filipinos for the adoption of digital banking. The country is currently among the countries with the lowest adoption of online banking, with an estimated number of 51.2 million unbanked adults or 71% of the total adult population (BSP, 2019). In BSP's 2019 National Baseline Survey in Financial Inclusion report, it was reported that although the number of Filipino smartphone users increased, only 12% of Filipino mobile phone users use their phones for financial transactions, and only 9% of those with Internet access are using the Internet for financial transactions. In addition to these challenges, internet infrastructure in the Philippines has been lacking. Last October 2020, the country's fixed broadband speed was ranked 32nd out of 50 countries in Asia. Fixed internet speed is at 28.9 mbps, while fixed mobile speed is at 18.49 mbps, which is only 10% of the fixed broadband of Singapore, the leader in Asia (Domingo, 2020). The current digital banks would also have to compete against banks that have built their reputation for several years in the country. In the S&P Global Rating report on digital banking (2020), digital banks in the Philippines are predicted to have three to five years before they become profitable as they go against larger traditional banks, which are expected to retain 60% market share in the next few years because of "strong brand recognition and long standing customer relationships."

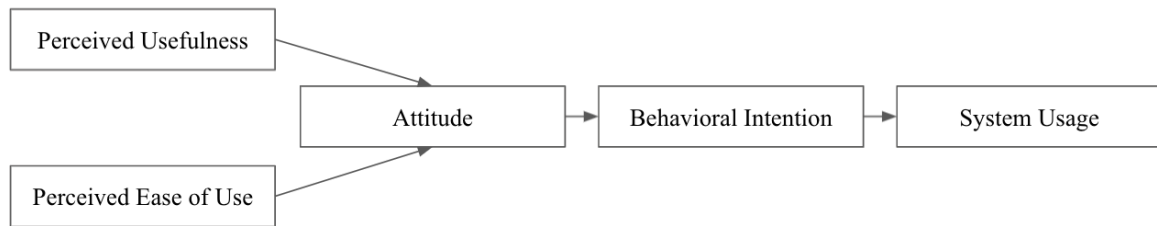
Although facing multiple challenges, BSP believes that digital banking is a way to increase financial inclusion by providing financial products that could be attainable by the unbanked. Through the BSP's Financial Inclusion Initiatives in 2021, the central bank aims to have "digital financial inclusion." With their Digital Payments Transformation Roadmap, their goal is to increase the digitalization of the country's retail transaction value to 50% and increase the financial inclusion of Filipino adults to 70% by 2023. With support from the central bank of the Philippines, the country is working towards an increase in digital banking adoption. According to Mckinsey Global Institute (MGI)'s report about digital finance (2016), the increase in digital finance adoption and usage may lead to a 6% increase in the GDP of economies by 2025. Through digital banking, over 1 billion unbanked individuals could have access to financial services, 2.1 trillion dollars of loans can be provided to people, \$110 billion can be gained by governments by reducing spending, and digital banks can save \$400 billion per year by shifting to a more digital service compared to traditional banking.

In this study, the objective is to answer the question: "Which factors influence people's behavior to use digital banking apps?". The researchers seek to extend the Technology Acceptance Model and investigate the significance and effect of indicators that influence Filipino consumers to use digital banking apps. Lastly, the researchers will look into marketing strategies that digital banks can use to increase adoption in the country.

Framework

To identify which variables influence usage of digital banking apps, we used the Technology Acceptance Model created by Davis (1989).

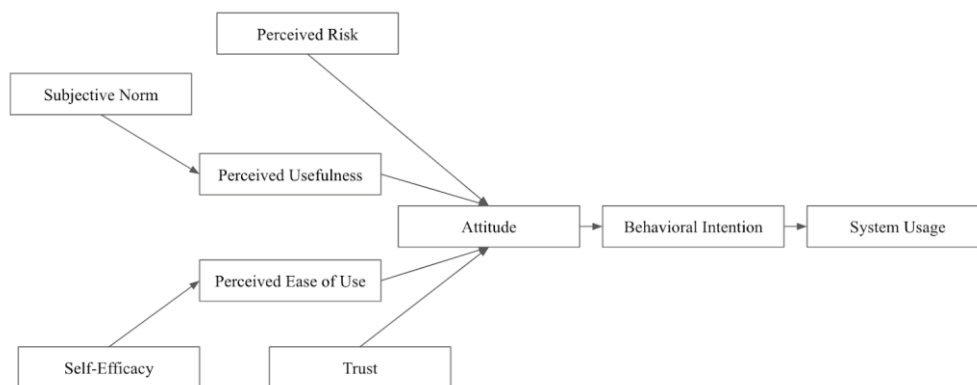
Figure 1
Technology Acceptance Model



Note. Technology Acceptance Model. Adapted from A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies by V. Venkatesh & F.D. Davis, 2000, 46(2), p.188. Copyright 2000 by Management Science.

The technology acceptance model (TAM) is used to measure the acceptance of a new type of technology based on people's attitudes towards its perceived usefulness and ease of use (Allen, 2020). The model suggests that external variables influence the attitude of a user towards using a specific technology. Perceived usefulness is defined as the "degree to which a person believes that using a particular system would enhance his or her job performance," while perceived ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, as cited in Koul, & Eydgahi, 2017).

Figure 2
Extended Technology Acceptance Model used in the study



In addition to the perceived usefulness and ease of use variables, the researchers also want to consider the following variables: perceived risk, subjective norm, self-efficacy, and trust.

Perceived risk is defined as “the consumer’s subjective expectation of suffering a loss in pursuit of a desired outcome” (Pavlou, 2001, as cited in Alalwan et al., 2015). People can feel "insecure" when they encounter threats that make them lose money in their banks

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(Featherman and Pavlou, 2003, as cited in Al Kailani, 2016). Al Kailani's (2016) studies show that perceived risk is one of the most influential factors in user's acceptance of online banking.

Subjective norm is defined as "one's insights related to social build pressures' expecting an individual to perform a specific behavior (Fishbein and Azjen, 1975, as cited in Shaikh et al., 2020). These social build pressures may come from their family, friends, coworkers, or the community. Studies have shown that subjective norms or social influence can impact an individual's attitude towards technology (Venkatesh and Morris, 1995, and Davis et al., 1989, cited in Al, Somali, et al., 2009).

Self-efficacy is defined as "a person's judgment of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, as cited in Shaikh et al., 2020). It deals with the individual's belief in their capacity to do things and has been shown to influence a person's intention to use technology (Bandura, 1977, as cited in Nasri, & Charfeddine, 2012).

Trust could also influence an individual's intention to use technology. It's defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectations that the other party will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, as cited in, Sinha, & Mukherjee, 2016). Findings by Sinha & Mukherjee (2016)'s study support that the more an individual trusts a bank, the more likely they are to use their online banking.

Methodology

Participants

Initially, participants in this study were Filipino consumers who use digital banking. Early in the data collection, the researchers observed a limited number of respondents who qualified for the questionnaire. The researchers changed the qualification from Filipino consumers who use digital banking to general Filipino consumers living in the National Capital Region and CALABARZON. A total of 80 individuals (57.5% females, 37.5% males, 5% LGBTQ+), aged 18 to 45 years old ($M = 25.275$ years, $SD = 5.68$) participated in the study.

Instruments

The researchers developed a Likert Scale questionnaire to measure participants' intention to use, perceived ease of use, usefulness, perceived risk, self-efficacy, trust, subjective norm, and attitudes toward using digital banking apps. Items were based on the literature on studies using Technology Acceptance Model (Venkatesh, V., & Davis, F. D, 2000; Weng, F et al., 2018; Park, S., 2009, Young, C., 2010, and Monteiro, 2012)

Perceived usefulness. Consumers' perception of the usefulness of all digital banking apps was measured using a three-item scale. Participants indicated their degree of agreement to each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was "I find the all-digital bank app useful to my life."

Perceived ease of use. Consumers' perception of the ease of use of all digital banking apps was measured using a six-item scale. Participants indicated their degree of agreement to

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each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was “I find the all-digital bank app easy to use.”

Subjective Norms. Consumers’ perceptions of their normative beliefs about all-digital banking apps were measured using a six-item scale. Participants indicated their degree of agreement to each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was “People who influence my behavior think that I should use the all-digital bank app.”

Self-Efficacy. Consumers’ perception of their self-efficacy towards using all-digital banking apps was measured using a three-item scale. Participants indicated their degree of agreement to each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was “I use the all-digital bank app when help services are available.”

Perceived risk. Consumers’ perceptions of the risk in using all-digital banking apps were measured using a nine-item scale. Participants indicated their degree of agreement to each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was “Using the all-digital bank app entails uncertainty or vulnerability.”

Trust. Consumers’ perceptions of their trust towards using all-digital banking apps were measured using a ten-item scale. Participants indicated their degree of agreement to each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was “Using an all-digital bank is financially secure as no money will be lost in unauthorized electronic fund transfers.”

Attitude. Consumers’ perceptions of their attitude towards using all-digital banking apps were measured using a six-item scale. Participants indicated their degree of agreement to each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was “I think it is valuable to use the all-digital bank app in life.”

Usage. Consumers’ perceptions on using all-digital banking apps were measured using a five-item scale. Participants indicated their degree of agreement to each item using a 5-point Likert agreement scale (1 = strongly disagree to 5 = strongly agree). A sample item was “Assuming I have access to the all-digital bank app; I intend to use it.”

Procedures

The researchers proposed the topic, framework, and questionnaire to their professor for his approval. After getting the approval, the researchers started data-gathering by pre-testing the questionnaire and then formal data collection. The questionnaire was developed through Google Forms and was disseminated to potential respondents in Facebook Groups and Messenger.

Data Analysis

The researchers pre-tested the questionnaire to 15 individuals. Data were analyzed through Jamovi software to determine the reliability of the constructs. All indicators were found to have a Cronbach's alpha of greater than 0.7, aside from SE1 and T2 indicators from

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the Self-Efficacy, and Trust variables, which the researchers removed from the official questionnaire.

The data gathered by 80 respondents during the official data collection was tested through SMART PLS 3.0. The researchers tested the construct reliability and validity of the data and found that all variables are reliable with a Cronbach's alpha of greater than 0.7. Using the same software, the 80 samples were bootstrapped into 5,000 samples.

Discussion of Results

The current study seeks to identify the variables that lead to digital banking apps using the Technology Acceptance Model, with perceived risk, trust, self-efficacy, and subjective norm as additional antecedents.

Findings show that attitude, perceived usefulness, subjective norm, and trust are significant positive indicators of usage of digital banking apps, while perceived risk, and perceived ease of use, and self-efficacy are insignificant positive indicators.

The significant influence of attitude towards usage of digital banking reflects other studies with similar findings (Prema, 2012; Suh, B. & Han, I., 2002; GU Et Al., 2009). As Davis (1989) showed in his TAM model, an individual's positive attitude is directly linked to their intention to use the technology.

Regarding the influence of perceived usefulness on the attitude towards digital banking, the relationship is strong. When individuals see that the technology can be used in their lives, they form a positive attitude towards using it. This reflects other studies with similar findings (Luarn, P., & Lin, H., 2005; Amin et al., 2008; Riquelme, H., & Rios, R., 2010, Turner, R., Seyal, A., & Rahim, M., 2011; Hanafizadeh, P et al., 2014; Patel, K., & Patel, H., 2018, Makanyeza, C., 2017, Sharma, et al., 2017).

The subjective norms are also a strong indicator of the attitude towards digital banking. An individuals' family, peers, or coworkers can influence their attitude, which is similar to other studies (Riquelme, H., & Rios, R., 2010, Patel, K., & Patel, H., 2018, Makanyeza, C., 2017, Sharma, et al., 2017).

Trust is also a significant factor in the attitude towards digital banking. The more an individual believes in the reliability of a digital bank app, the more likely they will develop a positive attitude towards using it. This also reflects other studies with similar findings (Suh, B. and Han, I., 2002; Hanafizadeh, P et al., 2014, Sharma et al., 2017, Kim, G., et al., 2009, Zhou, T., 2011).

Contradicting other studies, the perceived risk does not have a significant or strong influence on the attitude towards using digital banking. Other studies found that an individual's perceived risk can directly affect their intention to use the technology (Martins, C., Oliveira, T., & Popovič, A., 2014; Riquelme, H., & Rios, R., 2010, Makanyeza, C., 2017). This is also the same for perceived use, which disputes other studies that significantly influence intention to use (Makanyeza, C., 2017). However, the result which shows perceived ease of use as an insignificant finding is similar to other related literature (Turner, R., Seyal, A., & Rahim, M., 2011).

Conclusions

This study looked into the factors that influence the usage or adoption of digital banking in the Philippines, using an extended Technology Acceptance Model. Findings show that attitude, perceived usefulness, subjective norm, and trust are the significant indicators of the adoption of digital banking.

The digital banking industry needs to understand that Filipinos are still striving to understand the latest financial technology, as shown in the low penetration reported by BSP in 2020. Thus, it is recommended that marketing collaterals highlighting the value of banking are disseminated through the top channels where the market is active. Considering 96% of Filipino internet users use Facebook, and 95% use YouTube (Hootsuite, 2020), digital banks can utilize these social media channels to highlight and increase awareness of the benefits of their financial products. These can be in the form of ads featuring long-format videos and static content like infographics. By pushing for more awareness, digital banks can generate interest and persuade users to open an account with them. An example of a feature that digital banks can emphasize is the benefit that consumers can receive because of their higher interest rates than traditional banks (S&P, 2020). With the ever-changing digital landscape, banks must also be on the lookout for the latest trends in consumer behavior to provide relevant and valuable products to the target market. Digital banks can also provide referral features that encourage users to persuade their family or peers to use the services.

Although the fierce competition against the larger traditional banks is challenging, digital banks must work towards earning consumers' trust. It is recommended that banks provide quality customer service wherein inquiries are answered, and complaints are resolved, within a reasonable time. In addition, digital banks must also provide strong data protection to their customers against cybercriminals. Comparing 2019 to 2020, there is an increase in digital threats to customers, from malicious URLs, malware to ransomware. It is also reported that banks are now one of the top targets of cybercriminals (Inquirer.net, 2021). By providing security and privacy to their customers, digital banks can ensure that it is safe to transact with them.

Finally, as seen in the results, perceived ease of use and perceived risk do not directly translate to digital banking apps. Users may not consider the ease of use and risk of an app as significant factors for them to avail of its service since these may already be viewed as a given with the latest technology.

Limitations and Recommendations for Future Research

Most of the literature that served as the basis of the research is from the studies conducted in Asian financial institutions. There are limited studies based in the Philippines because published studies relating to the digital banking topic are minimal.

The respondents of the questionnaire are only from those who are residing from According to Castaneda, 2016 and Parenthetical: (Philippines Population Density), National Capital Region and CALABARZON, the densest regions in the Philippines where the population is mainly from the workforce who currently has a significant contribution to the financial aspect of their families. In addition, most of the Facebook groups where the questionnaire was disseminated are living in these regions. For future studies, researchers

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recommend conducting surveys in every region of the country in order to make other relevant discoveries.

The majority of the age group that answered the survey are aged 22-26, in the "Young Professional" Segment. In correlation with the previously mentioned limitation, as both researchers are young professionals, this is where they mostly got their responses – affiliates from former college organizations, classmates, colleagues. Widening the age bracket up to 50 years old to answer the survey may show significant changes in the results since the higher age brackets are composed of individuals who prefer the brick and mortar when it comes to banking as they do not trust the innovation and do not have guidance to use it.

Lastly, further studies related to the acceptance of digital banking technology can consider investigating how consumers' awareness and experience of the app can influence their intention to use it. Researchers can consider the degree to which the consumer is aware of the existence of this kind of app and how it can function in their lives, and on whether they have attempted to use the app and its features.

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Appendix

Figure 1

Technology Acceptance Model

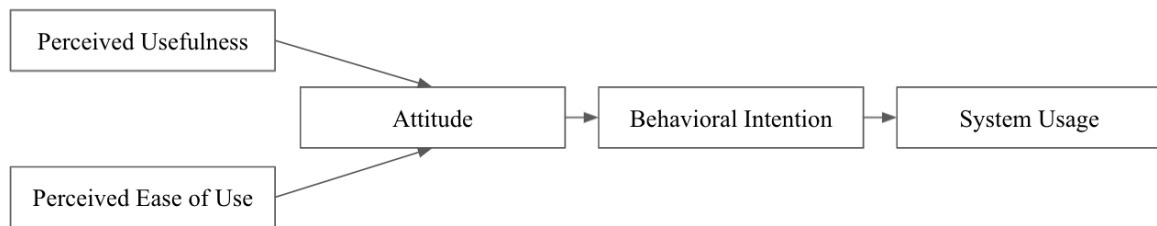


Figure 2

Extended Technology Acceptance Model used in the study

