Perceived Adoption Behavior of Filipinos to the Utilization of Online Banking and E-Wallet Payment Transactions

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Abstract

Current statistical data indicate that the Philippines still lags behind other progressing countries in transitioning to a cashless society despite the existence of technological innovations in promoting cashless transactions worldwide; hence, the study was conducted. The study investigated the behavioral factors that significantly influence Filipino users' adoption of online banking and e-wallets for payment transactions through Structural Equation Modeling (SEM) and a quantitative technique to show the causal relationships between determined variables as the primary research method. The findings indicated that Social influence, Perceived Environment, Facilitating Conditions, and Hedonic Motivation affect Filipinos' perceived trust in online banks and e-wallets for payment transactions, with Hedonic Motivation having the highest effect. Filipinos' Perceived Ease of Use with these services was also deemed to be significantly influenced by their Perceived Trust in using. This, in return, leads to a highly significant influence on their Perceived Adoption Behavior. The study provides insights regarding factors influencing Filipinos' perceived adoption behavior in using financial tools, offering further findings to improve online banking and e-wallet transactions in the Philippines.

Keywords
Behavioral Factors, E-wallets, Online Banking, Cashless Transactions, Structural Equation Modelling (SEM)

Introduction
The emergence of technological innovations transformed and increased the number of transactional methods in different parts of the world over the past years (Abbasi et al. 2022 & Rahman et al. 2020). Hence, cashless payments existed—financial transactions where consumers trade through digital payments without the presence of physical cash (Rahman et al. 2020). Digital wallets enable convenient and cost-effective transactions, revolutionizing banking

(Abbasi et al. 2022). Studies suggest it can reduce corruption in developing countries, potentially increase government revenue, and alleviate poverty if adoption barriers are addressed (Setor et al. 2021). It also offers convenience, speed, theft prevention, and improved security (Rahman et al. 2020 & Gorshkov 2022) and breaks down financial barriers, especially in areas like the Philippines (Nair 2016). A report by The World Bank (TWB) in 2022 stated that 76% of adults globally have an account at financial institutions (i.e., banks or mobile money providers), as of 2021, an increase from 68% and 51% in 2017 and 2011, respectively. The pandemic also increases the use of digital payments. The same report stated that over 40% of adults in low and middle-income economies transacted, either in-store or online, for the first time using a card, phone, or the internet ever since the start of the pandemic. As stated by TWB President David Malpass, the digitalization of transactions has increased the access and use of financial services worldwide; transforming the way consumers send, receive, borrow, and save money.

The Philippines has seen a rise in cashless transactions due to factors like Filipinos' growing wealth, a booming tourist industry, and increasing online shopping (Nair 2016). Recognizing the potential of digitalization, Bangko Sentral ng Pilipinas (BSP) aims to enhance efficiency, improve governance, and promote financial inclusion. Their efforts are yielding results, with the Philippines on track to exceed the goals set in their 2020 roadmap for digital payment growth. While progress is evident, further digitalization efforts are needed to fully bridge the gap in consumer transactions. The World Economic Forum (2021) reported that only 33% of Filipinos are willing to make card payments rather than cash. IMD also posted the World Digital Competitiveness Ranking 2022—a ranking where 63 global economies "were studied in terms of their ability to adopt and explore new digital technologies." It was reported that the Philippines scored 52.81, increasing the country from 58th in 2021 to 56th in 2022. Despite this, the Philippines still ranked last among the Southeast Asian economies listed, behind Singapore (92.40), Malaysia (76.42), Thailand (68.19), and Indonesia (56.74); Rank 4th, 31st, 40th, and 51st, respectively (Dela Peña 2022). A global study identified significant growth in innovative payment solutions and debit and credit card use across multiple countries, with Kenya, South Africa, UAE, and Poland demonstrating an extreme rise (Thomas 2013). Additionally, Asia is witnessing a surge in digital-only banking, with numerous countries launching virtual banks (Windasari et al. 2022). Notably, Malaysia reported a high volume of digital transactions in 2019, with e-money and internet banking accounting for over 74% of transactions (Rahman et al. 2020). Further, India processed over 71 billion digital transactions in 2022 (Dash et al. 2023). The Philippines still lags behind the progressing countries in transitioning to a cashless society. Hence, the study was conducted.

This study examines behavioral factors influencing the adoption of online banking and e-wallets for payment transactions among Filipinos. The findings aim to inform bank practices, user perception, and the advancement of digitalization in the Philippines, fostering national competitiveness in the digital landscape.

1.1. Objectives
This study aims to identify the significant factors that can influence Filipino consumers' adoption behavior toward the utilization of online banking and e-wallets for payment transactions. This study particularly intends to:

- Determine the present level of the utilization of online banking and e-wallet payment transactions among Filipino consumers of all generations (Baby Boomers, Generations X, Y, and Z)
- Identify the key factors affecting Filipino consumers' choice to accept or reject the use of online banking and e-wallet payment services.
- Utilize Structural Equation Modeling (SEM) to analyze the relationship of the determined variables and the adoption behavior of Filipino consumers from all generations in the utilization of online banking and e-wallets in payment transactions.
- Identify the behavioral challenges and opportunities encountered for the adoption of online banking and e-wallet payment transactions in the Philippines.

2. Literature Review

2.1. Digital Wallets in the Philippines
The earliest form of digital transaction in the Philippines can be traced back to 2001 when Smart Communications, Inc. launched 'Smart Money'—a mobile payment platform that enabled subscribers to transact (transfer money electronically, shop and pay online, settle bills, and reload prepaid accounts) with their mobile devices. The Smart Money account is linked to the user's bank accounts, receives remittances, and withdraws cash from automated teller machines (Smart Communications, Inc. 2012).

In 2004, Globe Telecom launched 'GCash', offering financial services, like cash loans, "buy now, pay later" offerings, and e-commerce, savings, investments, insurance, and money transfers (Globe 2022). It started as a service that offers Globe and TM subscribers a platform to remit money, settle loans, disburse salary or commission, donate, and pay bills, products, and services through text messaging. It is accessed through syntax in Short Message Service (SMS), a menu integrated into the SIM card from a SIM tool kit, or a menu retrieved through an over-the-air facility that pushes the menu to their SIM cards (cited by Ortiz 2022). Meanwhile, the Bank of the Philippine Islands (BPI) was the first to launch online banking in the country in 1999. In 2009, they followed the launch by introducing mobile banking. By 2019, BPI online and mobile banking surpassed the number of transactions done at the branch (Go 2021).

Digital payments in the Philippines continuously rose from 10% in 2018 to 14% in 2019, demonstrating a 27% increase in volume, mainly due to retail transactions (Bangko Sentral ng Pilipinas 2019). Several digital wallets exist and are emerging in the Philippines. A survey about the most used e-wallet service in October 2022 revealed that GCash, PayPal, and Maya are the top 3 leading e-wallets used in the Philippines. GCash, at 98%, leads the results for the most used e-wallet service, followed by PayPal and Maya at 61% and 49%, respectively (Statista 2023). BSP revealed that these digital payment systems help in cost savings, increased economic activity in the country, market inclusion and market expansion, and improved risk management. Small businesses and merchants, also known as Micro, Small, and Medium Enterprises, benefited from digital payments since it allowed them to manage their financial transactions better, create a formal financial system, improve their financial profile, and increase their creditworthiness.

Factors Affecting Adoption Behavior of Users to Online Banking Transactions

Financial services experience for customers worldwide has changed due to the information technology revolution in the banking industry. Online banking allows users to transact online, helping banks incur lower costs and higher client satisfaction (Hamakhan 2022). There is limited research on this generation's acceptability and usage of mobile banking applications. However, existing studies suggest various factors affecting the adoption behavior of online bank users.

Individual characteristics, system elements, and environmental factors impact customer adoption of e-banking. The acceptability of e-banking services is heavily dependent on trust (Hamakhan 2022). Furthermore, a study found that attitude and perceived behavioral control have a significant effect when it comes to their behavioral intention to adopt for both Taiwanese and Vietnamese users (Ho 2020). A study focusing on critical drivers of individuals' acceptance and behavior toward online banking also discovered that most users engage and dwell more on user-friendly platforms (Yamen 2023). The use of digital banking by Saudi Arabian users was also seen to be strongly correlated with demographics (gender, age, education, employment, and income) (Alnemer 2022). Furthermore, the study's actual findings support Technology Acceptance Model (TAM) with trust as an additional variable and age and education as a control factor.

TAM components of Perceived Ease of Use (PEOU) and Perceived Usefulness (PU), along with Trust, had a significant influence on the adoption of digital banking in Saudi Arabia. Achmad et al. (2022) explored the degree of mobile banking adoption in Indonesia from the viewpoint of self-efficacy, perceived credibility, and normative pressure employed the same model supported by SEM. The findings showed that customers are prepared to use mobile banking, but the system fell below their expectations; hence, perceived usability and ease of use are unimportant while self-efficacy and perceived credibility of users are deemed significant. TAM was also used in determining the fundamental causes of Indian consumers' desire to adopt mobile banking; behavioral factors, like trust and self-efficacy, had a statistically significant positive impact. Another study suggests that financial institutions and mobile banking app designers should consider the roles of facilitating conditions and institution-based trust (Thusi et al. 2020).

2.2. Factors Affecting Behavioral Adoption of Users to Electronic Wallet Transactions

Various studies also present factors affecting the adoption behavior of electronic wallet users. Yang et al. (2021) examined the intention and adoption of e-wallets, focusing on the factors influencing users' decisions to use digital payment methods, wherein perceived ease of use, social influence, facilitating conditions, and perceived trust were deemed significant factors. Patil et al. (2020) also conducted a study in India to understand the behavioral use of mobile payment by Indian consumers. The study found that personal innovativeness, anxiety, and trust significantly determine relevant factors such as attitude and behavioral intention.

2.3. Factors Affecting Users' Continuance Intention of Utilizing Cashless Transactions

Aside from behavioral adoption, the continuance intention of users was also analyzed. Abbasi et al. (2022) analyzed how quality and confirmation dimensions influence Malaysian users' continuance intentions in utilizing e-wallet applications. Confirmation dimensions significantly affect users' desire to continue using e-wallets, with usefulness having the highest effect. Quality dimensions affect usefulness confirmation significantly. Service and information quality also considerably affected the ease of use and security confirmation, with system quality not affecting the dimensions. System quality did not affect users' continuance intentions as they may influence security perception during the pre-adoption of e-wallets when users are trying it for the first time and need to depend on signals to examine system security. High information and service quality implies that service providers have invested resources and continuous effort to ensure users' quality experiences. Moreover, as results indicate that the factors significantly influence users' intention to utilize e-wallet services continuously, it still applies in distinct circumstances. Every individual still holds unique needs and points of view, which determine their intentions from different factors. Handoko (2022) also determined the factors influencing customers' continuous mobile payment use during the COVID-19 pandemic. It examined the positive factors that pull users towards mobile payments and the negative factors that push them away from cash payments. The study revealed that four factors: favorable attitude toward mobile payment, social influence, facilitating settings, and negative attitude toward cash payment significantly influence users' continuance usage.
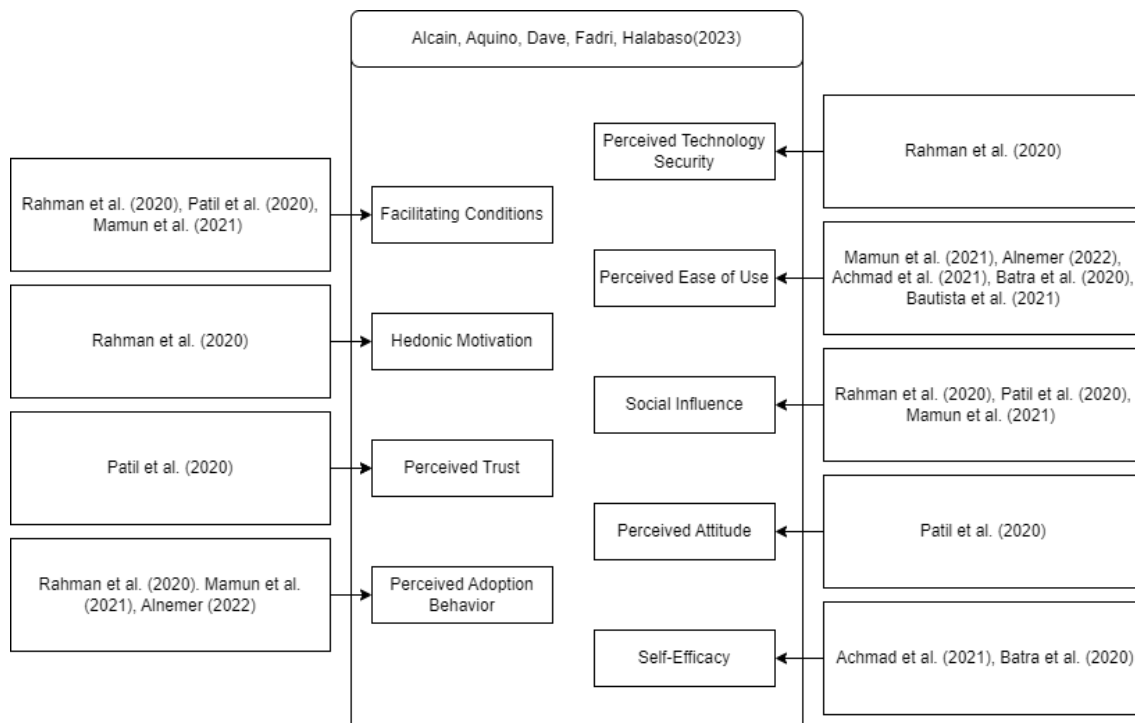
2.4. Theoretical Framework

Figure 1. Theoretical Framework

The figure above presents the variables from related literature considered in the study. Based on the references, the presented variables are some of the considered variables in determining the adoption behavior of consumers to digital payments which were all concluded by cited authors as significant factors.

Table 1. Hypotheses of Study

No.	Hypotheses
H1	Social influence has a significant effect on the perceived trust of Filipinos in the use of online banking and e-wallets for payment transactions.

H2	Social influence has a significant effect on the perceived attitude of Filipinos in the use of online banking and e-wallets for payment transactions.
H3	Social influence has a significant effect on the self-efficacy of Filipinos in the use of online banking and e-wallets for payment transactions.
H4	Perceived environment has a significant effect on the perceived trust of Filipinos in the use of online banking and e-wallets for payment transactions.
H5	Perceived environment has a significant effect on the perceived attitude of Filipinos in the use of online banking and e-wallets for payment transactions.
H6	Perceived environment has a significant effect on the self-efficacy of Filipinos in the use of online banking and e-wallets for payment transactions.
H7	Facilitating conditions has a significant effect on the perceived trust of Filipinos in the use of online banking and e-wallets for payment transactions.
H8	Facilitating conditions has a significant effect on the perceived attitude of Filipinos in the use of online banking and e-wallets for payment transactions.
H9	Facilitating conditions has a significant effect on the perceived attitude of Filipinos in the use of online banking and e-wallets for payment transactions.
H10	Hedonic motivation has a significant effect on the perceived trust of Filipinos in the use of online banking and e-wallets for payment transactions.
H11	Hedonic motivation has a significant effect on the perceived attitude of Filipinos in the use of online banking and e-wallets for payment transactions.
H12	Hedonic motivation has a significant effect on the self-efficacy of Filipinos in the use of online banking and e-wallets for payment transactions.
H13	Perceived trust has a significant effect on the perceived ease of use of Filipinos in the use of online banking and e-wallets for payment transactions.
H14	Perceived trust has a significant effect on the perceived ease of use of Filipinos in the use of online banking and e-wallets for payment transactions.
H15	Self-efficacy has a positive significant effect on the perceived technology security of Filipinos in the use of online banking and e-wallets for payment transactions.
H16	Perceived ease of use has a significant effect on the perceived adoption behavior of Filipinos in the use of online banking and e-wallets for payment transactions.
H17	Perceived technology security has a significant effect on the perceived adoption behavior of Filipinos in the use of online banking and e-wallets for payment transactions.

3. Methods

3.1. Research Design

This study was conducted through SEM, a quantitative predictive design, to evaluate the structural significance of the independent variables to the dependent variable. It was conducted to determine whether the independent variables affect the dependent variable and the acceptance or rejection of formed hypotheses.

Table 2. Constructs and Measure

Constructs	Items	Measures
Perceived Attitude (PA)	PA1	I like using online banking and e-wallets for payment transactions.
	PA2	It is a wise idea to use online banking and e-wallets for payment transactions.
	PA3	It is interesting to use online banking and e-wallets for payment transactions.
	PA4	It is beneficial to use online banking and e-wallets for payment transactions.
Perceived Trust (PT)	PT1	I trust online banking and e-wallets' systems to be reliable when I use them for payment transactions.
	PT2	I trust online banking and e-wallets' systems to be secure when I use them for payment transactions.
	PT3	I believe the system of online banking and e-wallets for payment transactions is trustworthy.

Self - Efficacy (SE)	SE1	I believe that I am good with the use of online banking and e-wallets for payment transactions.
	SE2	I believe I know how to navigate systems or applications of online banking and e-wallets for payment transactions.
	SE3	I do not feel helpless whenever the system of online banking and e-wallets cause a problem.
Perceived Technology Security (PTS)	PTS1	I think I am completely secured with the operations of online banking and e-wallets when paying.
	PTS2	I think paying through online banking and e-wallets are secure means even when sharing sensitive information.
	PTS3	I am comfortable with the use of online banking and e-wallets for payment transactions despite the possibility of weak and/or suspicious system security.
Perceived Ease of Use (PEOU)	PEOU1	Online banking and e-wallets are easy to use.
	PEOU2	I need to be skillful to use online banking and e-wallets.
	PEOU3	It is comfortable for me to remember how to perform a task with online banking and e-wallet services.
	PEOU4	I enjoy that payments done through online banking and e-wallet services only require minimum effort.
	PEOU5	My interaction with online banking and e-wallet service is clear and understandable.
Facilitating Condition (FC)	FC1	I have the resources needed to use online banking and e-wallets when paying.
	FC2	I have the needed knowledge to use online banking and e-wallets when paying.
	FC3	I believe that online banking and e-wallets are compatible with the other systems I use.
	FC4	I believe that online banking and e-wallet services are reliable in terms of protecting information.
Hedonic Motivation (HM)	HM1	I enjoy using online banking and e-wallets for payment transactions.
	HM2	I am less stressed when I depend on online banking and e-wallet than cash when paying.
	HM3	I feel good when paying through online banks and e-wallets.
Social Influence (SI)	SI1	I pay for goods and services using online banks and e-wallets because of Celebrities' influence.
	SI2	I pay for goods and services using online banks and e-wallets because of my family's influence.
	SI3	I pay for goods and services online through banks and e-wallets because of my friends and/or workmates influence.
Perceived Environment (PE)	PE1	I think if I live in a more urban area, I will use online banking and e-wallet when paying.
	PE2	I think if I live in a more rural area, I will use online banking and e-wallet when paying.
	PE3	My use of online banking and e-wallet when paying depends on where I am situated, either a more rural or urban area.
Perceived Adoption Behavior (PAB)	PAB1	I want to use online banking and e-wallets for my payment transactions.
	PAB2	I am most likely to adopt paying transactions through online banking and e-wallets frequently.
	PAB3	I want to recommend paying transactions through online banking and e-wallets to other consumers.

3.2. Subjects and Study Site

The study required a minimum sample size of 500 respondents, aligning with similar research on technology adoption (Patil et al. 2020 & Yang 2021) and satisfying sampling guidelines for models with multiple constructs, potentially low communalities, and limited measured items (Cham et al. 2020 & Hair et al. 2019). Aligned with the research design and grounded in the reviewed literature, data measures were selected for inclusion in the researcher-designed survey only if deemed pertinent. Demographic variables were assessed objectively, while a 5-point Likert scale was employed for psychographic variables. A self-administered survey with a structured questionnaire was used to collect data from qualified respondents on their experiences, thoughts, and knowledge regarding online banking and e-wallet use in the Philippines. Demographics, psychographics, and research variables were assessed using SEM to predict and evaluate adoption behavior.

Mode of Data Analysis
This study employed a combined approach of SEM, a multivariate technique encompassing factor analysis and regression, for investigating relationships between independent (perceived ease of use and security) and dependent (adoption behavior) variables, and descriptive statistics to summarize respondent demographics and Likert-scale responses (Elangovan 2015). SEM's assumptions (normality, linearity, etc.) were considered, and HTMT and Fornell-Lacker criteria ensured discriminant validity. Descriptive statistics summarized respondents' demographics and frequencies of responses on the Likert-scale items measuring independent variables, providing an overview of potential factors affecting their perceived adoption behavior.

4. Data Collection

4.1. Demographic Information
A total of 622 respondents participated in the study, with a slight majority being male (51.45%) compared to female (48.55%). The largest age group comprised individuals between 20 and 24 years old. Regarding geographical distribution, the National Capital Region had the highest representation of participants. The survey revealed that 64.79% of respondents held college degrees, making them the most prevalent educational group. Additionally, nearly half (47.91%) reported being employed full-time. Finally, the most frequent income bracket fell between Php 25,001 and Php 40,000, observed in 37.46% of participants.

4.2. Respondents' Usage of Online Banking and E-Wallets
The study reveals widespread use of mobile phones for online banking (86.98%). Payment transactions are the most frequent use, though usage frequency varies. BDO and BPI dominate as the most used online banks, but respondents utilize a range of other providers. Similarly, e-wallets are accessed primarily via phones (98.07%) and commonly used for payments (41.64% frequently). Usage frequency is high, with 21.54% of respondents employing e-wallets for all weekly transactions. A leading provider, GCash, is used by 80.55% of the respondents.

Results and Discussion

Numerical Results

Table 3. Model Fit Indices

Goodness of Fit Measure	Parameter Estimates	Minimum Cut off	Suggested by
Incremental Fit Index (IFI)	0.87	> 0.80	Gefen et al. (2000)
Tucker Lewis Index (TLI)	0.85	> 0.80	Gefen et al. (2000)
Comparative Fit Index (CFI)	0.87	> 0.80	Gefen et al. (2000)
Goodness of Fit Index (GFI)	0.82	> 0.80	Gefen et al. (2000)
Adjusted Goodness of Fit Index (AGFI)	0.78	> 0.80 > 0.77	Gefen et al. (2000) Brown et al. (2017) Liu et al. (2016)
Room Mean Square Error of Approximation (RMSEA)	0.08	0.06 to 0.08	Kyndt & Onghena (2014) Browne & Cudeck (1993)

The majority of the parameter estimates met all conditions except for the AGFI value, which was suggested as a minimum of 0.80. Gefen et al. 2000 suggested that 0.80 is the minimum cut-off for AGFI, in support of Liu et al. 2016 and Brown et al. 2017, suggesting that a value greater than or equal to 0.77 is acceptable enough. The researchers considered minor discrepancies to improve model fit while maintaining average values for each construct.

Table 4. Construct Validity

Construct	Cronbach's Alpha	AVE	Composite Reliability
Perceived Attitude (PA)	0.908	0.951	0.149
Perceived Technology (PT)	0.870	0.991	0.040

Self–efficacy (SE)	0.779	0.909	0.194
Perceived Technology (PT)	0.868	0.954	0.346
Perceived Ease of Use (PEOU)	0.808	0.989	0.055
Facilitating Conditions (FC)	0.883	0.977	0.084
Hedonic Motivation (HM)	0.860	0.977	0.083
Social Influence (SI)	0.573	0.436	0.605
Perceived Environment (PE)	0.268	0.338	0.664
Perceived Adaptation Behavior (PAB)	0.920	0.994	0.023

Notes: CR = (square of the summation of the factor loadings)/(square of the summation of the factor loadings) + (square of the summation of the error variances); AVE = (sum of the square of the factor loadings)/(sum of the square of the factor loadings) + (sum of the error variances)

The construct validity was first assessed using Cronbach's Alpha (CA), Average Variance Extracted (AVE), and Composite Reliability. The alpha values from Table 4 show that most fall within the recommended range of 0.6 to 07. Although there are some discrepancies in values, the Fornell-Larcker Criterion in Table 5 and Heterotrait-Monotrait Ratio (HTMT) in Table 6 were employed to further validate the results (Ursachi et al., 2015).

Table 5. Discriminant Validity

	FC	HM	PA	PAB	PE	PEU	PT	PTS	SE	SI
FC	0.90									
HM	0.63	0.89								
PA	0.61	0.69	0.89							
PAB	0.63	0.80	0.70	0.90						
PE	0.37	0.35	0.36	0.35	0.67					
PEU	0.80	0.74	0.66	0.70	0.41	0.80				
PT	0.51	0.65	0.67	0.60	0.30	0.55	0.85			
PTS	0.53	0.61	0.53	0.63	0.22	0.56	0.62	0.85		
SE	0.69	0.62	0.62	0.62	0.36	0.73	0.57	0.57	0.85	
SI	0.11	0.22	0.14	0.21	0.35	0.15	0.24	0.13	0.16	0.73

The constructs' discriminant validity was assessed using the Fornell-Larcker Criterion in Table 5, implemented in SMART PLS 4 software. This analysis involved comparing the diagonal values with the corresponding values in each row and column. For instance, Facilitating Condition (FC) has a value of 0.90; by comparing all the values on the FC column to that of FC = 0.9, all fall below which indicates that the constructs are well differentiated. The diagonal values consistently surpassed the off-diagonal elements, demonstrating good discriminant validity for the constructs.

Table 6. Heterotrait-Monotrait Ratio

	FC	HM	PA	PAB	PE	PEU	PT	PTS	SE	SI
FC										
HM	0.71									
PA	0.68	0.77								
PAB	0.70	0.89	0.76							
PE	0.62	0.60	0.60	0.60						
PEU	0.90	0.85	0.75	0.78	0.72					
PT	0.58	0.74	0.74	0.66	0.52	0.64				
PTS	0.59	0.70	0.58	0.69	0.41	0.65	0.71			
SE	0.81	0.73	0.71	0.71	0.64	0.87	0.67	0.67		
SI	0.16	0.31	0.19	0.29	0.83	0.25	0.33	0.19	0.24	

Table 6 presents an additional measure, the Heterotrait-Monotrait Ratio (HTMT), to analyze whether there is satisfactory discriminant validity. By observation, the values shown do not exceed the established threshold of 0.85 or 0.90 (Kline, 2011; Teo et al., 2008), suggesting discriminant validity for the constructs.

Graphical Results
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Structural Equation Modelling
The study examines the factors affecting the perceived adoption behavior of Filipinos toward online banking and e-wallet payment transactions. Six hypotheses were identified to be insignificant to the perceived adoption behavior of Filipinos: social influence to the perceived attitude of users (p = 0.846), self-efficacy to perceived technology security (p = 0.219), perceived environment to perceived attitude (p = 0.710), social influence on self-efficacy (p = 0.579), and perceived technology security and ease of use to perceived adoption behavior of Filipinos in using online banking and e-wallets for payment transactions (p = 0.273 and p = 0.096, respectively).

The hedonic motivation variable gained the highest beta value and lowest p-value (β = 0.57, p = 0.001), which suggests that it has the highest influence in the perceived trust of Filipinos. Hence, how they perceive the reliability of online banks and e-wallets is highly determined by the fun and pleasure they experience from using them. This is followed by the variables: facilitating conditions (β = 0.52, p = 0.002), perceived environment (β = 0.11, p = 0.005), and social influence (β = 0.02, p = 0.001). Significant facilitating conditions imply that when consumers have enough resources, both tangible and intangible (e.g., smartphones, online bank, and e-wallet accounts, internet, and etc.) to use cashless payments, then the more they would trust to use it also. Their actual (perceived) also influences their trust to financial services. Their trust depends on their location, i.e., if they were situated in a more urban or rural area. Lastly, the influence of their social environment (e.g., family, friends, colleagues, or celebrities) has an effect on how they perceive the reliability of digital payments.

The perceived trust of Filipinos to the use of online banks and e-wallets garnered a β-value of 0.87 and a p-value of 0.002; as the β-value gets closer to 1, the more it influences the perceived ease of use of the respondents to the mentioned services. How users find digital payment systems and procedures user-friendly and how they feel upon interacting with their system is influenced by how they perceive the reliability of said technology; if they trust a particular online bank or e-wallet, then they will also find it easy to use. Lastly, the perceived ease of use has a high influence to the perceived adoption behavior of Filipinos, considering that it gained a β-value of higher than 1 (β = 1.23, p = 0.002). This shows that online bank and e-wallet users' decision to accept and use such services repeatedly is highly influenced on how they find it easy to navigate and use. Furthermore, the variable obtained a high beta value (i.e., greater than 0.50) which means that the effect size of the independent variable on the dependent one is large (Nieminen, 2022). Jöreskog (1999) discussed that standardized coefficients can be larger than one in magnitude. This is because beta values, also called as standardized regression weights, are regression coefficients, not a correlations. Correlation presents the strength of the relationship of variables (Bewick, et al., 2003), while regression expresses how a variable affects another (Calvello, 2023). The study established that perceived ease of use as the only significant variable that influence the perceived adoption behavior of Filipinos in the use of online banking and e-wallets for payment transactions. This finding is supported by the cited literature wherein George (2018) presented that perceived ease of use has a significant effect on the perception of individuals who use Internet banking. Additionally, Alnemer (2022) discovered that this variable has a substantial marginal impact on online banking users and their adoption of online banking.

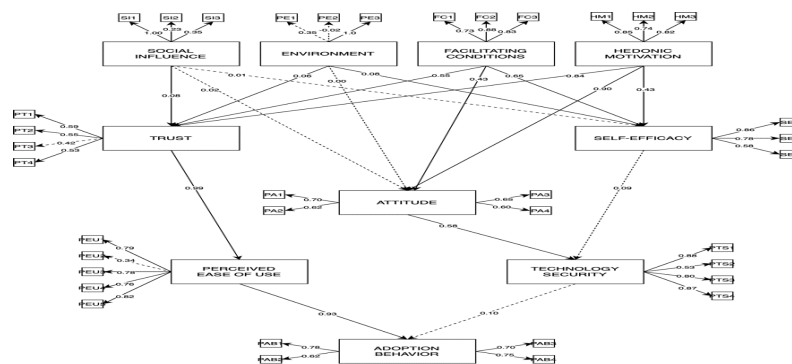### 5.2.1 Initial Model
5.3

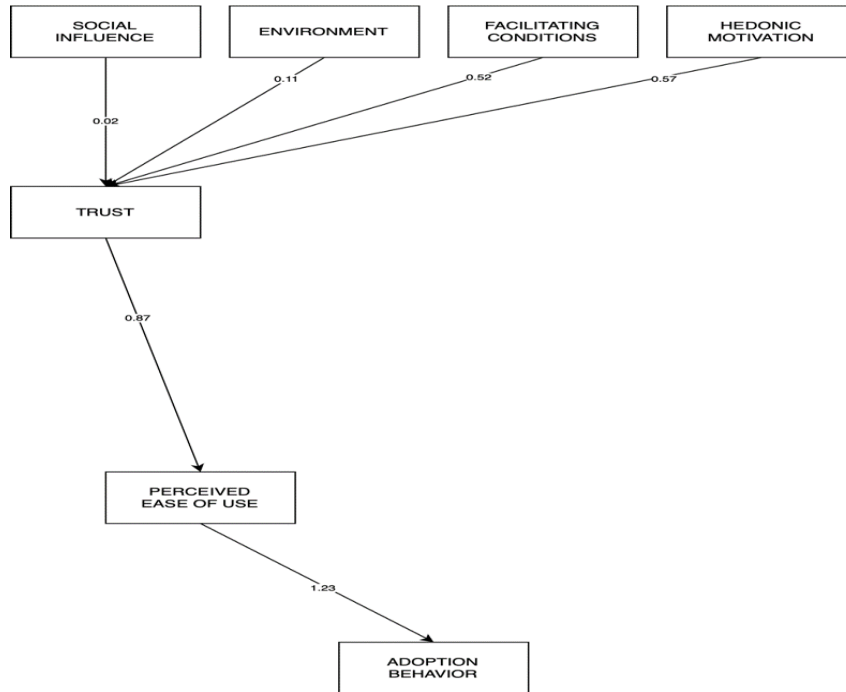Figure 2. Initial SEM Model

Final Model

Figure 3. Final SEM Model

Figure 2 and Figure 3 show the initial and final SEM models utilized in the study. The numerical values on Figure 2 connecting arrows present the p-values obtained upon running the initial models. Insignificant hypotheses were represented in broken lines due to their p-value exceeding 0.05. The factors deemed to be insignificant to the perceived adoption behavior of Filipinos were removed to derive the final SEM model, shown in Figure 3, which represents the β-values (beta values). The study reveals that HM is the most influential factor in Filipinos' PT in online banks and e-wallets. Other variables include FC, PE, and SI. PEOU influences PT in online banking and e-wallets, with a higher value indicating more remarkable adoption behavior. PEOU has a significant impact on Filipinos' PAB.

Conclusion

The Philippines' transition to a cashless society is progressing. This study examined factors driving Filipinos' adoption of online banking and e-wallets for payments in the Philippines. It found that social influence, perceived environment, facilitating conditions, and hedonic motivation all contribute to users' trust in these digital payment platforms. In addition, the study found that perceived ease of use (PEOU) is the primary factor influencing Filipinos' adoption of these services. Hedonic motivation (HM) strongly influences Filipinos' perceived trust (PT) in digital financial services. Providers should consider incorporating rewards systems or features redeemable for value to enhance enjoyment. Social influence (SI), perceived environment (PE), and facilitating conditions (FC) also impact user trust. Providers can foster trust by encouraging positive user reviews on social media, building online communities, using influencers, ensuring accessibility, providing responsive customer support, and collaborating with the government to promote financial literacy. The Perceived ease of use (PEOU) is a crucial driver of Filipinos' adoption of online banking and e-wallets. Providers should prioritize intuitive interfaces, clear instructions, and features that accommodate diverse users, including those with disabilities. Multiple languages, voice commands, and customization options can enhance the user experience. Service providers should provide extensive yet accessible support, such as in-app chat support, 24/7 customer service, or guides. They should also update applications to lower bandwidth and offer offline features for frequently used features. Users should clearly understand security measures.

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