| **RESEARCH ARTICLE**

Influencing Factors on Mobile Wallet Adoption in the Philippines: Generation X's Behavioral Intention to Use GCash Services

Alyssa C. Cacas[1] ✉ Mariel Bea Alecar S. Diongson[2] and Glenda Mica T. Olita[3]
[123]University of Santo Tomas, Philippines
Corresponding Author: Alyssa C. Cacas, **E-mail**: alyssa.cacas.comm@ust.edu.ph

| **ABSTRACT**

Over the years, financial services have constantly evolved from cash to card to digital transactions. The usage of cashless transactions in the Philippines is not as high in developed countries. The trajectory of generation X's behavioral intention to adopt GCash was popularized during this pandemic crisis. Currently, there is limited information on the influencing factors that impacts this behavioral intention on the adoption of the untapped target market. This paper aims to investigate the factors that influenced the mobile wallet adoption of generation X in the Philippines that focuses on perceived risk, ease of use, rebates, and social influence. From the survey of (N=385) non-users respondents, the results present a positive effect on generation X's behavioral intention to adopt GCash and a significant relationship between the influencing factors and behavioral intention. This study concludes that these influencing factors have a significant effect on the Filipino generation Xers' behavioral intention.

1. Introduction

For several years, financial service has consistently been evolving from cash to card to digital transactions, specifically GCash. The form of cashless transactions in the Philippines is not as high in developed countries. These days, the Filipinos have embraced the adoption of cashless transactions, and one of the pushing factors was the effect of the current crisis. The trajectory of generation X's behavioral intention, in particular, to adopt GCash was popularized during this pandemic crisis. The need for cashless transactions has become relevant and popularized (Endo, 2020). Bangko Sentral ng Pilipinas encouraged the Filipinos to shift to mobile transactions. There were different players in the financial service industry, specifically in the mobile wallet category. Although the prominent players of mobile wallet companies started as early as 2004, they were embraced slowly by the Filipinos (Endo, 2020). The number of mobile wallet participants has increased over the years. In 2002, Smart Communications introduced an SMS-based fund transfer called Smart Padala; later, it was rebranded to Paymaya as a digital financial innovation of Smart. Moreover, in 2004, Globe Telecom launched GCash, where ™ and Globe users can utilize it for cashless transactions (Crisanto, 2017). Mobile wallets provide security and convenience as it offers various and diverse payment methods accessible by the consumers.

The numerous entering participants in the mobile wallet category have created a broad avenue for the consumers to choose which to transact as different companies have different service offerings. All mobile wallets offer service convenience to the consumers with varying approaches to product offerings in their system. GCash provides a comprehensive payment system to pay bills, buy load, purchase goods and services, pay directly to online stores, and more. Moreover, other participants in the mobile wallet category provide similar services, which may influence the users to switch to a different mobile wallet provider.

Different studies have been published and reviewed on a global scale. However, limited studies cover the mobile wallet category in countries such as the Philippines on a domestic scale. This study attempts to fill this limited information by investigating the

influencing factors that impact the behavioral intention of generation X to adopt the mobile wallet, i.e., GCash. The study argues that significant factors on the mobile wallet adoption impact generation X's behavioral intention to adopt these digital payment options. Generation X must take a further step must be taken for generation X to be encouraged to use e-wallets, such as GCash. Within the age group of 41-56, Generation X accepts the mobile wallet relatively less than the younger generation, i.e., millennials. Still, they contribute to adoption growth by utilizing digital payment alternatives. Berraies et al. (2016) state that generation X, 41-56 years old, adapts heavily to modern technology. However, Karr (2017) asserts that they are adaptable even though they were not born with the digital lifestyle. Gupta and Aurora (2019) suggest focusing on segments and other perspectives on the mobile wallet and its adoption. A study in the United Arab Emirates shows the role of mobile payment quality as a contribution to user satisfaction, which discusses the effect of positive expectations on the technology used (Mouakket, 2020). Moreover, other studies state the economic impact of mobile payment in the country has caused economic growth brought by the transactions done on the mobile wallet that increased the Gross Domestic Product (GDP) of Indonesia (Handarkho & Harjoseputro, 2019).

The next section presents the review of related literature. It provides a general overview of how users shift from the traditional mode of payment, which is cash, to mobile wallets. Furthermore, this broadens the understanding of generation X's factors in adopting a mobile wallet.

2. Literature Review

Studies about mobile wallets highlighted the widely used for financial transactions, solutions for convenience, and other activities for fund transfer. The evolution of cashless transactions has brought convenience with the touch of the user's mobile gadget. In previous studies, users prefer to transact using cashless methods rather than the traditional payment method since they find it more convenient and easier to use (Abdullah, A. et al., 2021). Different factors in adopting mobile wallets were identified in this field of study, such as perceived risk, ease of use, rebates, and social influence. Moreover, the Diffusion of Innovation and Unified Theory of Acceptance and Use of Technology (UTAUT) were used to analyze the consumer behavior toward mobile wallets (see, e.g., Lazo & Casu, 2017; Abdullah, A. et al., 2021). However, the influencing factors on Mobile Wallet Adoption that affect Generation X's behavioral intention to use GCash services have been overlooked.

Mobile wallets shaped the way people undertake their financial transactions. It is a frequently used transaction in developing countries, as it eases the fund transfer and purchasing activity of the user Kumar (2018). With the digitalization and increase of cashless transactions, an Indonesian study claimed that infrastructure, income level, and education are related to the perceived preparedness in going cashless (Balakrishnan et al., 2021). Mobile wallets are also considered payment solutions. Mobile payments have become the alternative transaction for cash, and it is accepted as a better consumer experience (Handarkho & Harjoseputuro, 2019). In India, Young Indians prefer to use mobile wallets to address their banking needs because they are more driven into using these contemporary technologies that are convenient and easy to use (Singh et al., 2017). The innovation of mobile phones opened an array of new methods of payments providing convenience and interactivity (Mouakket, 2020). In Indonesia, when it comes to fintech services, e-money and e-payments are the most favoured. Mobile payments are becoming more reliable, and e-commerce and online services are growing, and broad, wherein suppliers and delivery networks also expand (Abdullah, A. et al., 2021). The advancement of technology has also improved government payment systems and significantly impacted the gross domestic product in Eastern Europe, according to Lazo and Casu (2017).

Perceived risk has evolved into a critical factor influencing mobile wallet adoption - one of the behavioral factors that Hew et al. (2019) reported in their study. The degree of mutual trust created on the users and the mobile wallet technology should be instilled to increase the technology usage. It determines their decision to push through the transaction or not. Thus, security in transactions is vital in influencing the users to transactions through mobiles, and if the users have experience with mobile wallet transactions, the higher the chances of building trust in the transaction (Oney et al., 2017). There is also perceived trust in the commitment of one user to a mobile wallet. There is knowledge-based trust, institution-based trust, calculative-based trust, cognitive-based trust, and personality-based trust. This factor affects one's sense of trust in the mobile wallet (Fan et al., 2018).

Mobile wallets' usefulness and ease of use are promoted through campaigns by financial companies. They emphasize the solutions mobile wallets can bring, such as convenience and better experience in transacting (Flavian & Guinaliu, 2020). According to Adeel et al. (2018), in earlier studies, it came out that perceived usefulness, ease of use, satisfaction, and usage intention can affect consumer trust, which can influence their behavior in terms of usage. Most consumers are already literate in using smartphones. Therefore, mobile payments are user-oriented (Chandra, 2019). With the growing number of mobile wallet users, providing ease of use can positively affect customer satisfaction and generate positive consumer attitudes (Aita, 2018). Moreover, Singh et al. (2017) stated that ease of use is one of the most influential variables when it comes to adoption and usage. Ease of use allows the consumers to save time as it contributes to optimizing the product. In a study by Dhir (2020), first-time mobile payment users portray usefulness and establish the intention to use once they discern factors such as security, ubiquity, and ease of use.

With the rapid growth of mobile wallets, users are considering looking for a service provider that offers higher promotional benefits. According to (Madan & Yadav, 2016), promotional benefits provided are one of the contributing factors to why consumers prefer to use mobile wallets as an alternative payment method. It can be composed of cashback payments, loyalty points, and referral rewards (Chawla & Joshi, 2019). It serves as an additional benefit to them since it saves them money by redeeming coupons or vouchers that can be used in their following transactions (Bagla & Sacheti, 2018). In addition, Mei et al. (2020) highlighted in their study that reward systems are also an effective way to attract new customers, specifically those who belong to a younger demographic. Hence, integrating this system, such as cashback, in their mobile payment will motivate users to adopt mobile wallets (Khong & Teng, 2020). In line with this, Jung et al. (2020) pointed out that providing incentives may increase their motivation to try mobile payment and widen their knowledge about the service.

The influence of peers can be a determining factor in the formation of a trust to accept. The study of Matemba & Li (2017) showed that one of the variables contributing to social influence acceptance is trust. The influence of the peers on other potential users forms a trust that will determine the willingness to adapt to the technology. Moreover, in the study of Madan & Yadav (2016), the influence of family, peer groups, friends, virtual people, and social media positively impacts behavioral intentions to adopt.

A theory used to analyze the behavior of the consumers is the Diffusion of Innovations. It is one factor that shows the consumers' adoption of mobile wallet technology. There are five phases of adoption: innovators, early adopters, early majority, late majority, and laggards (Lazo & Casu, 2017). According to Megadewandanu (2016), social influence also influences the behavior of the consumer. It states that early adopters should be satisfied with the service on the mobile wallet so they can influence and recommend it to others. According to Handarkho & Harjoseputro (2019), one of the reasons a consumer adopts new technology is the experience it brings to the user, as this provides pleasure and enjoyment. Furthermore, in the study of Gopalakrishnan et al. (2021), the technology acceptance model was mentioned as a theory on the intention to use mobile wallets of the customers. Social factors such as family and peers also positively impact and influence the adoption.

The Unified Theory of Acceptance and Use of Technology (UTAUT) integrates eight combined models, focusing primarily on user intention and behavior. It is a framework designed to understand better the adoption and use of technology (Abdullah, A. et al., 2021). To be able to know the factors that can influence mobile wallet adoption in the Philippines, the study will have to consider examining the individual's user intention and usage behavior (Balakrishnan et al., 2021). UTAUT can contribute to the development of the study's results through its employment with the research topic and can also help analyze the level of acceptance of generation X when it comes to mobile wallets. The study is also supported by Innovation Diffusion Theory, which is one of the oldest social science theories that can help advance user acceptance as it studies how the technology diffuses through a particular method or technique. The theory contributes to how technological advancements, such as mobile wallets, escalate to broader adoption.

3. Methodology

The study utilized a descriptive correlational method. Descriptive correlational research design is used to describe the variables presented and look for the relationship among them. This is used to determine the relationship of perceived risk, ease of use, rebates, and social influence on the behavioral intention of generation X to GCash. Moreover, this allows the researchers to understand the extent of the behavior of the respondents. The use of descriptive correlational design helps the researchers to understand the variables from the behavior of generation X and know its relationship with their adoption. The descriptive correlational design provides an accurate and valid presentation of the relevant factors to the research question. In addition, the researchers utilized a self-constructed questionnaire. A questionnaire is one of the different types of research instruments that consists of a series of questions designed to elicit information from respondents (McLeod, 2018). The Likert scale is employed to measure the perception of the users about the influential factors. Mean, and standard deviation are used to understand further the results, as they can help in computing the frequency data. Furthermore, regression is utilized to know if the influencing factors affect the behavioral intention of generation X. Lastly, since this study is correlational research, Pearson correlation is used to determine if there is a significant relationship between perceived risk, ease of use, rebates, and social influence to the adoption of generation X of GCash.

The questionnaire is divided into seven parts. Part one is the screener questions for the researchers to know if the respondent is qualified to answer the questionnaire. Part two is about determining the demographic profile of the respondents in terms of their gender, age, and educational attainment. Part three to six focuses on assessing the influencing factors: perceived risk, ease of use, rebates, and social influence to generation X. Lastly, part seven determines the respondents' behavioral intention to adopt a mobile wallet, specifically GCash. The validation of the questionnaire is conducted through a pilot test using the google survey forms with a sample size of thirty respondents for its reliability through the use of Cronbach's alpha. The questionnaires are distributed via google forms link to gather the primary data.

4. Results and Discussion

Table 1. Descriptive Statistics

Factors	Mean	SD	Interpretation
Perceived Risk	2.39	0.6321	Agree
Ease of Use	2.85	0.5940	Agree
Rebates	2.84	0.7725	Agree
Social Influence	2.71	0.5846	Agree

Table 1 illustrates the Descriptive Statistics, which shows the factors influencing generation X to adopt mobile wallets in the Philippines. The mean and standard deviation were calculated to analyze the data. In the survey, the researchers have used the Likert scale with response options of strongly agree (4), agree (3), disagree (2), and strongly disagree (1). However, the scale is vice-verse in value for the perceived risk since it comprises negative statements; it is as follows: strongly agree (1), agree (2), disagree (3), and strongly disagree (4). The data above indicate that the results of the three factors, specifically ease of use, rebates, and social influence, fall under 2.5 - 3.24, which means that respondents agree, but for perceived risk, scale value is perverse and is under 1.75 - 2.49, which also means that the respondents agree. Thus, results reveal that ease of use has the highest mean and perceived risk has the lowest.

Table 2. Regression Analysis Summary for Behavioral Intention

	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	1.020	0.140		7.285	0.000
Perceived Risk	-0.042	0.033	.035	-1.292	0.197
Ease of Use	0.090	0.034	0.101	2.670	0.008
Rebates	0.207	0.026	0.302	7.971	0.000
Social Influence	0.524	0.035	0.578	14.786	0.000

Dependent Variable: Behavioral Intention
Note: $R^2_{adj} = 0.487$, (N = 385, p = 0.00)

Table 2 shows the Regression Analysis Summary for Behavioral Intention. Multiple regression was calculated to predict the behavioral intention to use GCash services using various factors such as perceived risk, ease of use, rebates, and social influence. A significant regression equation was found ($F_{(4, 380)} = 92.287$, $p < 0.00$), with adjusted R^2 of 0.487. The respondents' predicted behavioral intention is equal to 1.020 + 0.090E + 0.207R + 0.524S, where E is ease of use, R is rebates, and S is social influence. Among these factors, all are significant except perceived risk ($\beta = -0.042$; $p = 0.197$). Therefore, H2, H3, and H4 postulated in the study are accepted. However, no positive effect can be established between perceived risk and generation X ($\beta = -0.042$; $p = 0.197$). Thus, we reject H1, which states that there is a positive effect of the perceived risk on the behavioral intention of generation X to adopt GCash at the 5% level of significance. Furthermore, the respondents' predicted behavioral intention increases by 0.090 for every one unit increase in ease of use. Similarly, the respondents' predicted behavioral intention increases by 0.207 for every one unit increase in rebates and 0.524 for every one unit increase in social influence.

As per the results in Table 2, the most important factor for the respondents is social influence ($\beta = 0.524$; $p = 0.000$), followed by rebates ($\beta = 0.207$; $p = 0.000$), and finally ease of use ($\beta = 0.090$; $p = 0.008$).

Table 3. Correlation Coefficient of Factors to Behavioral Intention

Factors	Behavioral Intention
Perceived Risk	0.116*
Ease of Use	0.243**
Rebates	0.396**
Social Influence	0.613**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Table 3 portrays the correlation of the factors; perceived risk, ease of use, rebates, and social influence to the dependent variable, behavioral intention. There is a significant relationship between Perceived Risk and Behavioral Intention, whereas its correlation is significant at the 0.05 level (2-tailed). It was also found that Ease of Use, Rebates, and Social Influence have significant relationships with Behavioral Intention as well, as their correlation is significant at the 0.01 level (2-tailed). Hence, it signifies that social influence has a moderate positive relationship to behavioral intention, while the other three have a low positive correlation.

Therefore, in spite of Perceived Risk having no effect according to regression, all factors have a significant relationship with Behavioral Intention. As per the results from Table 3, H5 that presumes a significant relationship between the influencing factors and the behavioral intention of generation X to adapt GCash, is accepted.

The results show that perceived risk does not affect generation X since it has a high significance level with a p=0.197, compared to the usual level of significance, which is p=0.05. This indicates that it has no positive effect on their generation. A similar study by Heang et al. (2020) and Cabanillas et al. (2020) found that perceived risk is insignificant in adopting e-wallets, although it is one of the most appropriate measurements for the adoption of mobile wallets. Generation X understands the value of risk associated with GCash services; however, it does not significantly affect their intention to adopt because there are factors that they believe to be more relevant. Regardless of the significant relationship between perceived risk and behavioral intention, it does not significantly impact the respondents' intention to adopt. Bautista (2020) stated that generation X is not a laggard of technology adoption as they have witnessed the evolution of internet marketing. It is evident in the data above that shows generation X agrees on the negative impact of using mobile wallets as they are aware of the risk on security and data privacy concerns. Comparing perceived risk with ease of use, the data shows that it has a significant relationship and effect on the adoption of GCash services.

Ease of use has a significant relationship between behavioral intention to adopt GCash and shows a positive effect on generation X's intention to adopt. In Alwi (2021) study, it is claimed that the technology becomes more important to consumers if it is easy to use. This is consistent with Valencia et al. (2021) study, stating that generation x will have higher chances to adopt mobile payments if they see it as easy and useful. Since generation x is an untapped market of GCash, this factor is crucial in increasing their intention to adopt. Once they figure out that this new technology is easy to use and trouble-free, it will likely influence and motivate them more. Valencia et al. (2021) also showed that providing a step-by-step guide is a must for generation X. It can serve as an accompaniment that can make it easier for generation x to utilize the new technology.

Rebates also positively affect generation X's behavioral intention to adopt GCash. It is the second most important factor influencing their decision to use mobile wallets such as GCash. The results validated the study of Bhatt et al. (2021), in which rewards in the form of discounts and cashback are vital in determining their intention to use a specific brand of the mobile wallet application. This demonstrates that rebates effectively motivate generation X to utilize the services of GCash as it is one of the e-wallet companies in the country that offers competitive types of rebates for its customers. This is beneficial for their generation to save money in their future transactions as they are at the age wherein they are still responsible for the expenses of their children since they are still staying with them. As a result, rebates will be of great help in lowering expenses, which may encourage them to adopt GCash by using it more frequently.

Social influence ranks as the most significant factor in the adoption of generation X to GCash services (β = 0.524; p = 0.000). This result is similar to the study of Cabanillas et al. (2020), where it found that social influence is one of the determining factors in the adoption of mobile wallets. According to Heang et al. (2020), peers' feedback and recommendations affect the adoption of mobile wallets. The results of the study are also consistent with Abdullah et al. (2021); Do N. & Do, H. (2020); Abrahao et al. (2016); and Jung, J. et al. (2020), where social influence has a positive effect on the adoption of mobile wallets. Generation X is likely to adopt mobile wallet technology with external factors such as family, peers, and social groups. They are practical-minded as they would not try unless others tried first. Furthermore, if the same generation influences generation X, they become more confident in trying mobile wallet technology (Bautista, 2020).

5. Conclusion

Our study finds that the four influencing factors are significantly associated with generation X's behavioral intention to adopt GCash. The perceived risk has no positive effect on generation X, while the ease of use, rebates, and social influence has a positive effect on generation X's behavioral intention to adopt GCash services. As the most significant factor influencing the Filipino generation Xers' behavioral intention, the social influence may be considered by GCash in implementing their marketing strategies to effectively influence their generation to use their services.

In this time of the digital age, mobile wallets have been relevant to day-to-day transactions. GCash opened its services, not just to tech-savvy individuals but as well to other users who are willing to adapt to a new payment system. According to Baustista (2020), generation X may not be born in the digital age, but they are part of the evolution of technology. GCash should focus more on exploring how they can make generation X refer their services offered to their family and peers who belong in the same age group. Generation X are practical-minded until they are comfortable in utilizing the technology; whether others recommend or try using it, they will remain where they are confident.

With the results, starting to make a small group of generation X believe in GCash is the first step towards influencing those who are still non-users from their generation. As this generation agrees that ease of use can significantly impact their behavioral intention to use GCash services, developers of the application should further improve the mobile interface for those not born in the digital age to seamlessly access the offered services. The factor of receiving rewards in the form of cashback and discounts from using GCash also positively motivates generation X; hence, GCash can introduce new marketing initiatives that they can implement to reward both users and non-users and stimulate the desire to use GCash.

Moreover, future researchers can further study the behavior of generation X using the four (4) influencing factors by utilizing both quantitative and qualitative methods. Through this, it will gather additional insights to further comprehend the behavior of the generation. Also, future researchers can utilize other factors such as perceived usefulness in their studies to further understand their behavioral intention to use the services of GCash since the study only focused on four specific factors.

Future researchers can also analyze the behavioral intentions of generation X in other regions of the country since the study focused only on generation X residing within Metro Manila. With this, they can discover if there is a difference in the factors that generation X from rural regions consider in adopting mobile wallets.

References

[1] Abdullah, S., Alpandi, R., Alwi, S., Salleh, M. & Ya'acob, F. (2021). Fintech As Financial Inclusion: Factors Affecting Behavioral Intention To Accept Mobile E-Wallet During Covid-19 Outbreak. *Turkish Journal of Computer and Mathematics Education, 12(7).* https://doi.org/10.17762/turcomat.v12i7.3356

[2] Abdullah, A., Mohiuddin, M., Nawi, N., Yang, M., & Zainol, N. (2021) Cashless Transactions: A Study on Intention and Adoption of e-wallets. *Sustainability 2021 13*(2). Retrieved from https://doi.org/10.3390/su13020831

[3] Adeel, L., Cao, X., Gong, M., Liu, Zhiying, L. & Yu, L. (2018). Understanding mobile payment users' continuance intention: a trust transfer perspective. *Internet Research 28*(1). Retrieved from https://doi.org/10.1108/IntR-11-2016-0359

[4] Aita, J. & Ramadan, R. (2018). (2018). A model of mobile payment usage among Arab consumers. *International Journal of Bank Marketing.* Retrieved from https://doi.org/10.1108/IJBM-05-2017-0080

[5] Abrahao, R., Andrade, D., Moriguchi, S. (2016). The intention of adoption of mobile payment: An analysis in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT). *Innovation & Management Review.* Retrieved from http://dx.doi.org/10.1016/j.rai.2016.06.003

[6] Bagla, R. K., & Sancheti, V. (2018). Gaps in customer satisfaction with digital wallets: Challenge for sustainability. *Journal of Management Development*, *37*(6), 442–451. Retrieved from https://doi.org/10.1108/jmd-04-2017-0144

[7] Balakrishnan. (2021). Drivers and inhibitors for digital payment adoption using the Cashless Society Readiness-Adoption model in Malaysia. *Technology in Society.* Retrieved from https://doi.org/10.1016/j.techsoc.2021.101554.

[8] Berraies, S.; Yahia, K. B. & Hannachi, M. (2016). Identifying the effects of perceived values of mobile banking applications on customers: Comparative study between baby boomers, Generation X, and Generation Y. *International Journal of Bank Marketing*, *35*(6), 1018- 1038. Retrieved from https://doi.org/10.1108/IJBM-09-2016-0137

[9] Cabanillas, F. Singh, N. & Sinha, N. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management.* Retrieved from https://doi.org/10.1016/j.ijinfomgt.2019.05.022

[10] Casu, O. & Lazo, E (2017). Towards a new transformation of e-payments paradigm: a case study on Moldovan public services. *KTH Industrial Engineering and Management.* Retrieved from https://kth.diva-portal.org/smash/get/diva2:1193669/FULLTEXT01.pdf

[11] Chandra, Y. Karsen. M. & Juwitasary, H. (2019). Technological Factors of Mobile Payment: A Systematic Literature Review. *Procedia Computer Science 157,* 489-498. Retrieved from https://doi.org/10.1016/j.procs.2019.09.004

[12] Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – an empirical study. *International Journal of Bank Marketing*, *37*(7), 1590–1618. Retrieved from https://doi.org/10.1108/ijbm-09-2018-0256

[13] Chawla, D., & Joshi, H. (2020). The moderating role of gender and age in the adoption of the mobile wallet. *Foresight.* Retrieved from https://doi.org/10.1108/FS-11-2019-0094

[14] Crisanto, J. M. (n.d.). *PayMaya serves the unbanked in the Philippines through the mobile app*. The Asian Banker. Retrieved from http://www.theasianbanker.com/updates-and-articles/paymaya-serves-the-unbanked-in-the-philippines-through-the-mobile-app?fb_comment_id=1492155010858199_1742700142470350.

[15] Dhir, A., Islam, N., Khalil, A., Mohan, G. & Talwar, S. (2020). Point of adoption and beyond. Initial trust and mobile-payment continuation intention. *Journal of Retailing and Consumer Services.* Retrieved from https://doi.org/10.1016/j.jretconser.2020.102086

[16] Do, N. & Do, H. (2020) An investigation of Generation Z's Intention to use Electronic Wallet in Vietnam. *Journal of Distribution Science.* Retrieved from http:/doi.org/10.15722/jds.18.10.202010.89

[17] Endo, J. (2020, July 19). Digital payment grows in PHILIPPINES amid COVID-19 fears. *Nikkei Asian Review. Global Digital News.* Retrieved from https://globaldigimon.blogspot.com/2020/07/digital-payment-grows-in-philippines.html.

[18] Fan, J., Shao, M., Li, Y., & Huang, X. (2018). Understanding users' attitude toward mobile payment use. *Industrial Management & Data Systems*, *118*(3), 524–540. Retrieved from https://doi.org/10.1108/imds-06-2017-0268

[19] Flavian, C. & Guinaliu, M. (2020). Mobile payments adoption - introducing mindfulness to better understand consumer behavior. *International Journal of Bank and Marketing.* Retrieved from https://doi.org/10.1108/IJBM-01-2020-0039

[20] Gopalakrishnan, S., Kavitha, S., Sriram. V.P., & Vinayagamoorthi G. (2021) Accessibility and adaptability of emerging technology among mobile wallet customers using TAM model. *Journal of Contemporary Issues in Business and Government*, *27*(2). Retrieved from https://doi.org10.47750/cibg.2021.27.02.252

[21] Gupta, K., & Arora, N. (2019). Investigating consumer intention to accept mobile payment systems through the unified theory of acceptance model. *South Asian Journal of Business Studies*, *9*(1), 88–114. Retrieved from https://doi.org/10.1108/sajbs-03-2019-0037

[22] Handarkho, Y. D., & Harjoseputro, Y. (2019). Intention to adopt mobile payment in physical stores. *Journal of Enterprise Information Management*, *33*(2), 285–308. Retrieved from https://doi.org/10.1108/jeim-06-2019-0179

[23] Heang, L., Tenk, T., & Yew, H. (2020). E-wallet adoption: A case in Malaysia. *International Journal of Research in Commerce and Management Studies, 2*(2). Retrieved from http://ijrcms.com

[24] Hew, T., Leong, L., & Wei, J. (2020). Predicting mobile wallet resistance: A two-staged structural equation modelling-artificial neural network. *International Journal of Information Management.* Retrieved from https://doi.org/10.1016/j.ijinfomgt.2019.102047

[25] Jung, J., Kim, D., & Kwon, E. (2020). Mobile payment service usage: U.S. consumers' motivations and intentions. Computers in Human Behavior Reports. Retrieved from https://doi.org/10.1016/j.chbr.2020.100008

[26] Karr, D. (2021, February 23). *Generational marketing: How each generation has adapted to and utilizes technology*. Martech Zone. Retrieved from https://martech.zone/generation-technology/.

[27] Khong, K. & Teng, S. (2021). Examining actual consumer usage of E-wallet: A case study of big data analytics. Computers in Human Behavior. Retrieved from https://doi.org/10.1016/j.chb.2021.106778

[28] Kumar, A., Adlakaha, A., & Mukherjee, K. (2018). The effect of perceived security and grievance redressal on continuance intention to use m-wallets in a developing country. *International Journal of Bank Marketing*, *36*(7), 1170–1189. Retrieved from https://doi.org/10.1108/ijbm-04-2017-0077

[29] Li, G. & Matemba, E. (2018). Consumers' willingness to adopt and use WeChat wallet: An empirical study in South Africa. Technology in Society, 55-68. Retrieved from https://doi.org/10.1016/j.techsoc.2017.12.001

[30] Madan, K., & Yadav, R. (2016). Behavioural intention to adopt mobile wallet: A developing country perspective. *Journal of Indian Business Research*, *8*(3), 227–244. Retrieved from https://doi.org/10.1108/jibr-10-2015-0112

[31] Mew, J. & Millan, E. (2021). Mobile wallets: key drivers and deterrents of consumers' intention to adopt, *The International Review of Retail, Distribution and Consumer Research, 31*(2)*,* 182-210. Retrieved from https://doi.org/10.1080/09593969.2021.1879208

[32] Mcleod, S. (n.d.). Questionnaire: Definition, Examples, Design and Types. Questionnaire:: Definition, Examples, Design and Types | Simply Psychology. Retrieved from https://www.simplypsychology.org/questionnaires.html.

[33] Megadewandanu, S., Suyoto, & Pranowo. (2016). Exploring mobile Wallet adoption in INDONESIA USING UTAUT2: An approach from a consumer perspective. *2016 2nd International Conference on Science and Technology-Computer (ICST)*. Retrieved from https://doi.org/10.1109/icstc.2016.7877340

[34] Mei, T., Moghavvemi, S., Phoong, S.W & Phoong, S.Y. (2021). Drivers and barriers of mobile payment adoption: Malaysian merchants' perspective. *Journal of Retailing and Consumer Services*. Retrieved from https://doi.org/10.1016/j.retconser.2020.102364

[35] Mouakket, S. (2020). Investigating the role of mobile PAYMENT quality characteristics in the United Arab Emirates: Implications for emerging economies. *International Journal of Bank Marketing*, *38*(7), 1465–1490. Retrieved from https://doi.org/10.1108/ijbm-03-2020-0139

[36] Oney, E., Oksuzoglu Guven, G., & Hussain Rizvi, W. (2017). The determinants of electronic payment systems usage from consumers' perspective. *Economic Research-Ekonomska Istraživanja*, *30*(1), 394–415. Retrieved from https://doi.org/10.1080/1331677x.2017.1305791

[37] Singh, N., Srivastava, S., & Sinha, N. (2017). Consumer preference and satisfaction of M-WALLETS: A study on North Indian consumers. *International Journal of Bank Marketing*, *35*(6), 944–965. Retrieved from https://doi.org/10.1108/ijbm-06-2016-0086.