

## Fintech As Financial Inclusion: Factors Affecting Behavioral Intention To Accept Mobile E-Wallet During Covid-19 Outbreak

Shaliza Alwi<sup>1</sup>, Masrina Nadia Mohd Salleh<sup>2\*</sup>, Rabiatul Munirah Alpandi<sup>3</sup>, Fatin Farazh Ya'acob<sup>4</sup>, Siti Mariam Mellisa Abdullah<sup>5</sup>

<sup>1</sup>School of Accounting & Finance, Faculty of Business & Law, Taylors University, Malaysia  
Email: shaliza.alwi@taylors.edu.my

<sup>2</sup>Centre for Australian Degree Program (CADP), INTI International College, Malaysia  
Email: masrina.salleh@newinti.edu.my

<sup>3</sup>School of Accounting & Finance, Faculty of Business & Law, Taylors University, Malaysia  
Email: munirah.alpandi@taylors.edu.my

<sup>4</sup>Department of Economics, Universiti Teknologi MARA Cawangan, Johor Kampus Segamat, Malaysia  
Email: fatinfarazh@uitm.edu.my

<sup>5</sup>Centre for Australian Degree Program (CADP), INTI International College, Malaysia  
Email: mellisa.abdullah@newinti.edu.my

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**Abstract:** Mobile e-wallet or digital e-wallet is one of the emerging Financial Technologies (FinTech) that has become extremely prevalent during the last few years. As even the technology is growing, it is crucial that researchers recognize the factors that affect technology adaptation. Even, with the world's pandemic and the digitalisation of the banking system and modes of payment, it may have and disability. This research paper will therefore concentrate on defining the factors affecting behavioral intent to implement mobile e-wallet after the COVID-19 outbreak. The indicators highlighted in the paper are perceived usefulness, perceived ease of use, perceived health, perceived social impact, perceived value. Health alert, transactional costs and their impact on mobile e-wallet adoption. The data was analyzed using multiple regression analysis, Alpha and Factor analysis from Cronbach. The study revealed a significant impact including its estimated model on the behaviour intent to implement mobile e-wallet.

**Keywords:** Fintech; E-wallet; COVID-19; Behavioral intention; Financial inclusion; Technology

**Biographical notes:** Shaliza Alwi is a Lecturer at Taylors University Malaysia. Her areas of expertise are Finance specifically in Corporate Finance, Derivatives and Islamic Banking and Finance. She holds a Master of Business Administration from Charles Sturt University, Australia. She actively published papers since 2015 until present.

Masrina Nadia Mohd Salleh is a Lecturer at Centre of Australian Degree Program in INTI University College, Malaysia. She is currently pursuing PHD at her final stage in Universiti Teknologi Malaysia. She holds a Master of Science in Finance, Investment and Risk from University of Kent (UK). She is teaching Australian undergraduate program (UOW). Her areas of expertise are Fintech, Finance, Investment and Derivatives. She is a registered member of Fintech Professionals Association (FPA)

Rabiatul Munirah Alpandi is a Lecturer at Taylors University Malaysia. She holds a Doctor of Philosophy (Economics), from Universiti Putra Malaysia, Malaysia. She published a book titled Competitiveness swiftlet of edible bird's nest industry which published by Malaysian Environmental Economics Association (MEEA), a member of economy and environment partnership for southeast Asia (EEPSEA). She actively published papers and book chapters since 2017 to present.

Fatin Farazh Ya'acob is a Lecturer at UiTM Malaysia. She holds a Doctoral Degree and actively published articles and book chapters. She is a senior lecturer in UiTM Johor for few years.

Siti Mariam Mellisa Binti Abdullah is a Lecturer at INTI International College, Subang where she teaching Economics under Australian Degree Programs (University of Wollongong and Swinburne University of Technology). She holds a Doctoral Degree from Universiti Putra Malaysia (UPM), specializing in Natural Resources and Environmental Economics. Besides that, she had received an appreciation letter from the operator of Min House Camp, Kubang Kerian, Kelantan for her research activities at the community-based ecotourism site. Her contribution has strengthened the will of Min House Camp to get the ASEAN Community-based tourism award that would bring benefits to the further development of our business in rural local communities in Kelantan. Nur Ain Ayunni Sabri is a Lecturer at Department of Business, Faculty of Entrepreneurship & Business, Universiti Malaysia Kelantan (UMK) where she teaches both undergraduate and postgraduate courses in entrepreneurship and business. She holds PhD. Mathematics, from University of Leicester, United Kingdom. She is a Member of 'Persatuan Akademik Berorganisasi (PRO's)', Universiti Malaysia Kelantan.

## 1 Introduction

With ever-increasing acceptance and adaptation of personal mobile devices such as smartphones personal digital assistants (PDAs), flexibility has been given high significance for many consumer products as well as to services. Therefore, in this day and age, technological advancements have led consumers to use more and more portable devices for perform their day to day activities such as making payment transaction (Azlisham et al., 2021). With the invention of credit and debit cards the world has been moving towards a cashless society Consumers have been relying predominantly on non-cash means of payments such as, debit card, credit card automated check processing, pre-paid cards and online methods as well. Hence, the economies moving towards a virtual payment (Ibrahim et al., 2019).

Societies are on the horizon of shifting to a cashless community. Over the past decade, traditional payment methods using cash has been rapidly replaced by electronic payment alternatives (de Almeida et al., 2018). Money is the most commonly used payment instrument worldwide, according to global cash report 2018. According to the 2019 World Payments Survey, the global volume of non-cash transactions during 2016-17 rose to \$539 billion, the highest amount in the past two decades, at 12 per cent. Emerging markets like Asia at 32% and CEMEA at 19% while traditional markets like APAC, North America and Europe retained a growth rate of approximately 7 % in 2017. And step closer to a cashless society. The reason for this was widespread digital wallet adaptation, comprehensive performance of e-commerce platforms, endless advances in mobile payments, modernisation of payment systems and growing number of alternative payment methods (World Payments Report, 2019).

Countries like Sweden account for just 2 percent of cash transactions that are expected to fall further in the following years, thereby emerging as one of the world's most cashless economies. However, cash transactions in the United Kingdom accounted for up to 40%, which dropped by 15 % in 2017 due to the adoption of new technology and payment technologies, so cash transactions are anticipated. Accordingly, cash transactions are expected to decline to 16% by 2027 (World Payments Survey, 2019).

Hence with the growing use of alternative payment forms. One of the instruments on use has been the mobile wallet. Mobile payment methods have therefore delivered easy and convenient services to a multifunctional network. A certain payment process done on mobile devices is known as mobile payment. Several forms of mobile payment services are available. Mobile wallet is one of the in-store and remote payment systems available (Liébana-Cabanillas et al., 2017). Mobile wallet is also a technology that needs to be enabled on users' smartphones, enabling users to store money and perform online transactions directly. As the world is slowly moving away from using cash, contingent on technology for making payments, mobile e-wallet has been one of the proficient instruments. With the growth in use of technology and shift to use alternative payment methods, mobile e-wallet has been one instrument in the use. However, mobile e-wallet is fairly new instrument to the world and is emerging over the years very few researchers have studied this area. The studies that related the factors influencing the adoption of mobile wallet due to the changes faced by the COVID-19 pandemic has not been researched. It is important to identify the unknown factors affecting the adoption of mobile wallet payment from the perspective of the upcoming generation of consumers with considerations of the global pandemic (Fauziyana et al., 2021). The viewpoints of consumers on the adoption of mobile wallet has not been explored sufficiently. Hence, it is significant to conduct this research to understand the adoption of the mobile wallet in consumer perspective of the newer generation.

The findings of this study are crucial as it can serve as a useful input for the academic researchers, local business groups, policymakers, and mobile wallet consumers. Also, with the covid-19 outbreak and the quick spread of the virus globally has also lead people to change some of the practices such as using alternative means of payments rather than cash. Several experts' advice to minimize the usage of cash leaving people to use other methods such as mobile wallet. Therefore, could create a change in the behavioral intention to use mobile wallet creating a significant need to be researched.

## 2 Literature review

The year, 2020 has reached the planet with the COVID-19 pandemic bringing the most unforeseen declines. This pandemic also affects the management and leadership of an organization (Norazmi et al., 2019). Subsequent constraints will result in a deficit for effective leadership (Norazmi, 2020). Inefficient leadership and management will result in incompetent staff (Norazmi et al., 2020). The epidemic that began in Wuhan City, China is rapidly spreading and the world is falling short to stop the virus from hitting the globe. Therefore, this is predicted to have tremendous impact globally on money transactions or cash transactions. With this epidemic, it is expected by the environment to be digitized further. The pandemic and fear of contamination has contributed to greater caution and reluctance in using cash (Melamedov, 2020). According to a paper published by the Bank for International Settlements, the epidemic had led to unprecedented public concern about viral cash transmission, with central banks reporting a major rise in media inquiries about the protection of using cash

and internet searches for the combination of "cash" and "virus" soaring (Huet & Murray, 2020). Consequently, payments are expected to be more digitalised with the spread of the virus.

While the COVID-19 has questioned conventional banking practices, it will take up digitalization and new methods such as mobile e-wallet as a new to in-person banking and cash transactions. This is because of factors such as the World Health Organization (WHO), which urges people not to use as much cash as possible because coronavirus will continue to live. Therefore, the disease will spread further (Melamedov, 2020). So that will push bankers to consider creative and modern payment methods such as mobile e-wallet.

### *2.1 Consumer Acceptance and Adoption*

Jenkins and Ophoff (2016) defines intention to adopt as the acceptance of anything based on the person's willingness on a certain object. Consumers intention to adopt a particular technology is indicated based on their understanding and behavior of used of modern technologies. Hence, the consumer acceptance is indicated as the willingness exhibited by the users on the information of mobile wallet by their respective users. The acceptance of users is not proven based on their claim to use for an unintended purpose by customers, meaning consumers acceptance must be proven by actually using the technology. Consistency in the use of a method requires efficient management (Zaid et al., 2020). Efficient management can form optimal power and resilience (Zaid et al., 2021). Acceptance has also been an important research area since the middle of the 1900s. Acceptance research has provided useful information in assessing a new products and services success or failure. Acceptance of technology by consumers has shown individual expectations and attitudes can affect consumer acceptance (Alwi et al., 2019). The main results of this paper are thus to define market acceptance of mobile wallet payment services by quantifying the behavioral purpose of consumers and actual use behavior (Surendran, 2012). The research will concentrate on the adoption and acceptance of individuals of digital wallet given the importance of consumer behaviour.

### *2.2 Theory of Technology Acceptance (TAM)*

The Technology Acceptance Model (TAM) is an information systems theory developed by Venkatesh and Davis (1996) which models the way by which users come to accept and adopt a novel technology. TAM is one of the utmost dominant extensions of Theory of Reasoned Action (TRA), and the Theory of Planned Behavior (TPB). There two theories have long offered valuable conceptual frameworks to deal with the complexities of human social behavior (Surendran, 2012). The core idea of the TAM model is to explain the external factors affecting the internal attitudes and use intentions of the consumers (McCord, 2007). Also to further predict the acceptance and use of new systems and technologies through those factors (Davis, 1989).

The objective of the TAM model is to provide a justification of the determinants of general computer acceptance, which is an efficient method to explain individual's behaviors across wide range of end-user computing technologies and consumer populations, while at the same time being both parsimonious and justified theoretically. The theoretical model assesses the effect of program features on the recognition of computer-based information systems and software by individuals (Lule et al., 2012). The model indicates that when users are come across a new technology, there are number of factors influencing their decision on how and when they prefer to use it. TAM involves three prime predictors to identify a potential adopter, those are perceived usefulness (PU) and perceived ease of use (PEOU) and perceived risk (PR) of technology as the main elements in determining the attitudes toward a novel technology (Rehman & Shaikh, 2020). Perceived utility is the degree to which the individual toward using device can boost his or her efficiency and user satisfaction of use is the degree to which the individual assumes that using a specific software would be out of difficulty (Lule et al., 2012).

### *2.3 Perceived Usefulness (PU)*

The degree to which an individual believes that consuming a particular information system would improve his or her work performance is known as Perceived Usefulness. In general, individuals appear fascinated to embrace new technologies when the technology is believed to be more helpful and suitable for their daily lives (Rehman & Shaikh, 2020). Hence consumer's attitude and their intention to adopt mobile wallet is projected by Perceived Usefulness (Munoz & Climent, 2017). According to Davis (1989), any system that generate higher degree of perceived usefulness is expected to create positive attitude by consumers to adopt the technology. It is also defined by the extent to which an individual believes the technology would improve their work or quality of life (Rogers, 2010). Perceived usefulness encompassed of the effectiveness of the work, timeliness and significance of the system (Mathwick et al., 2002). Therefore, the mobile e-wallets should create a degree of usefulness which would result in positive attitude by the users as any system or technology which does not aid the users

would not be adopted. According to Davis (1989), perceived usefulness is an important factor which influences the consumers.

#### *2.4 Perceived Ease of Use (PEOU)*

Perceived Ease of Use is the level to which an individual using a specific information system is free of hassle or effort (Davis, 1989). This is important because consumers may believe a system application is greatly beneficial nevertheless may find it difficult to use (Rehman & Shaikh, 2020). Thus, the easier the use of a technology is, the more valuable it would be for customers, increasing its adaptation and usage (Ali & Arshad, 2016). Also, mobile wallets have unique features, consumers are obliged to have certain amount of knowledge and awareness therefore perceived ease of use plays a crucial role in affecting individuals' attitudes to accept such a technology (Makanyeza, 2017). According to Rogers (2010), perceived ease of use also has a positive relationship towards the intention to adopt by the consumers. It plays a significant role in motivating the consumers to adopt newer technologies (Lule et al., 2012). Thus, it is important that the technology is easy to use as complexities of the innovations would negatively affect the individual's intention to adopt. This is due to the simple fact of not being able to figure out or understand the use of the technology in the most comprehensive way (Rogers, 2010). Therefore, numerous empirical studies have shown that Perceived Ease of Use plays a crucial role in predicting consumers' intentions to use mobile wallet, corroborating its impact on individuals' attitudes (Rehman & Shaikh, 2020).

#### *2.5 Perceived Security (PS)*

Perceived Security of risk is the uncertainty about the outcome of the use of a technology or the uncertainty on its level of security (Rehman & Shaikh, 2020). According to Tan and Leby (2016), individuals were reluctant to accept technologies such as mobile wallet due to the fear and existence of insecurity, and mounting uncertainty increased the awareness of risk. Perceived Risk is acknowledged as a dynamic factor in foreseeing an individual's attitude and intention to use mobile wallet (Rehman & Shaikh, 2020). An increase in the perception level of risk would decrease consumers' attitudes and intentions towards mobile wallet.

According to Ooi and Tan (2016), perceived risk or security is the perception of safeguarding from the worrying risks related to payments via mobile, such as risk of data loss, personal data loss which could in turn lead to financial loss. The concerns related to security is a very crucial in the case of mobile payments and mobile wallet as it involves financial service, subsequently influencing the adoption decisions (Liébana-Cabanillas et al. 2018). The association between perceived security and intention to use different mobile payments has been studied in a number of past studies. Musa et al. (2015) discovered that perceived security to be the strongest factor in predicting the consumers' intention to use mobile payment in Qatar. In an explicit context of NFC mobile payment, Liébana-Cabanillas et al. (2018) acquired a parallel result which showed perceived security to be among the strongest predictors.

#### *2.6 Social influence (SI)*

In past research studies, perceived attitude and social impact were used as independent variables to assess their effect on the purpose of using a technology (Hemchand, 2016). Attitude is usually used to determine and test the intention and its affect on an individual's actual behavior (Verkijika, 2018). Schierz et al. (2010) realized a clear and optimistic connection between the attitude of the customer and the intention to use mobile payment services like mobile wallet. Similarly, social influence influences the intent of a person to use a specific technology and seems to have a strong impact on the attitude of the consumer (Verkijika, 2018). Hence, the degree to which a customer perceives the importance of certain individuals such as family and friends in embracing a new technology is known as social impact (Lule et al., 2012).

#### *2.7 Price value (PV)*

The value of the price is known as "the cognitive trade between the perceived benefits of the applications and the monetary cost of using them" (Dodds & Monore, 1991). Several researchers have studied the significance of Price Value on new technology, it shows that consumers were more likely to adopt a service with good price value (Merhi et al., 2019). The cost of using mobile e-wallet would be associated with the need to own a smartphone, a strong internet connects as well as other additional costs. Thus, when costs are incurred the users would expect a worth output or service for the costs they incurred. Therefore, perceived value would have a direct influence when individuals decide to adopt a new technology. This vital relationship is further supported by the study of (Venkatesh & Thong, 2012).

## 2.8 Health Precaution(HP)

This is a new variable, which has not been studied by scholars to identify the behavioural intention to adopt mobile e-wallet. The variable is added to this study to show the impact of the ongoing COVID-19 pandemic and the effect of the situation on the use mobile e-wallet. This is because, with the risk declared by World Health Organization (WHO) in using cash as it could further soar the spread of the deadly virus, it is advised to minimize use cash as means of payment. Therefore, it is believed to result in innovative or digitization of the banking system as a whole, resulting increase in use of technologies such as mobile e-wallet (Huet & Murray, 2020). Hence, it is highly likely to have a positive relationship towards consumer's intentions to adopt mobile e-wallet as a mean of health precaution to safeguard from the coronavirus.

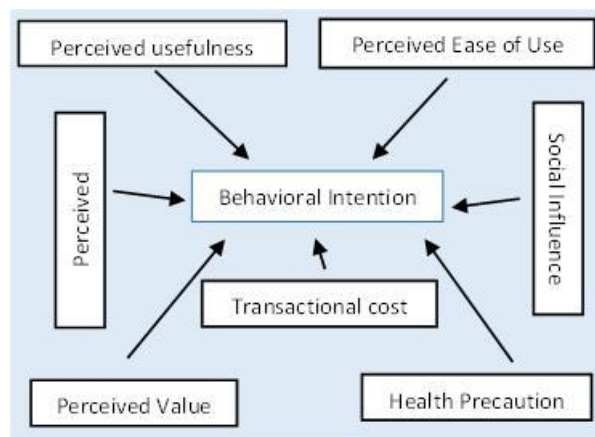
## 2.9 Transaction Cost (TC)

Transaction costs are significant factor in consumers deciding how mobile e-wallet platforms should be used. When consumers consider the digital e-wallet service's transaction cost to be reasonable, they become likely to embrace something and using it. Economic crisis and performance are indeed frequently the subject of acceptance studies according to Mathieson et al. (1991). This attribute has been used in earlier studies on acceptance of digital e-wallets (Luarn & Lin, 2004). The awareness of costs will keep many consumers from selecting the platform. In addition, hardware / software and monetary resources is critical to information technology users. Depending on the value of the literature transaction, the choice of the user to use digital e-wallet is likely to be directly affected.

## 2.10 Research Framework

Research framework for this study is depicted in Figure 1.

**Figure 1** Research Framework



Source: Developed by authors

## 3 Methodology

This analysis is focused on quantitative research and descriptive research first as purpose of such study is to analyse that have a major impact on accepting the adoption of mobile wallet after the outbreak of Covid 19. Descriptive research, also identified as observation - based designs, is a kind of definitive research aimed at determining the classification and function of market attributes.

In this study, systematic analysis is applied to establish the relationship between variables and what factors actually influence the acceptance of digital wallet by the user. This work therefore contains a self-reported questionnaire to provide more detailed explanations of the causal factors. The sample size of this study provides each client of digital wallets regardless of the geographic region.

The questionnaires are circulated through "Google Survey" - which is as online spreadsheet program requiring only a little effort of sharing the respective link with the respondents during the collection process. In addition, this approach is ideal as the questionnaire can be answered to address problems of geographical barriers compared with conventional survey system. Throughout this analysis, closed-ended / structured questions were adopted to standardize the responses to ease the process of interpreting data from large quantities of answers to ensure consistency and reliability of the results. Similarly, closed-ended questionnaires restrict the

number of respondents' responses and shorten the length, because survey participants only need to select the best choices mostly from answers provided. There are two methods of data collection, namely primary and secondary. For this research primary data was collected, which can be done via surveys, questionnaires and observations. Hence, questionnaire was used to collect the data in regard to their behavioral intention towards adopting mobile e-wallet. According to Mihail and Elefterie (2006), questionnaire is a research tool which is comprehensively accepted in behavioral science was the reason numerous researchers used questionnaire. This has therefore been proven as a consistent and reliable method by many. Thus, the questionnaire was shared among 200 respondents, from different countries including Malaysia, Maldives, United Kingdom, India, Bangladesh and many more.

#### 4 Results and discussion

The frequency of the gender with in the 200 respondents who participated in the survey. According to the table above, 49% of the respondents are female while 51% are male, accounting 98 females and 102 males. Sample t-tests were performed to identify the relationship between the variables and the gender group. Based on the t-test sample results, there is no statistically significant difference based on significance p-value [Sig. (2 tailed)] which is higher than 0.05 for all of the variables. This however does not comply with the study of Ataran and Nami (2011) which found that there is a statistically significance with intention to adopt new technologies based on the gender. The number the age groups that participated in the survey. It shows the majority of the respondents were of the age 16-25 years old, accounting for 81.5% (163 respondents) among 200 participants. This is followed by 9.5% of the age group of 26-40 years' old which is 19 respondents. Only 8% of respondents are below 16 years. This illustrates that mobile e-wallet is most popular among the young generation of 16-25 years old. Hence, the independent t-test was performed to identify whether there is a statistically significant difference between the dependent and independent variables in terms of the two age groups, 16-25 years old and 26-40 years old. According to the independent sample t-test there is no statistical significant difference between the age groups and the variables as the significance p-value is higher than 0.05. This however does not match with the study of Morris and Venkatesh (2000), which shows new technologies such as FinTech is adopted by the younger customers.

Table 1 illustrates the Anova Output which shows majority of the responses was from Chinese respondent accounting 35% (70 respondent) among 200 participants. It was followed by 28% of Malay respondents, 22% from other ethnicities, 14.5% Indians and only 0.5% Maldivians. This illustrates that most of the respondents were from Malaysia as the survey was conducted and reached to mostly among Malaysia. ANOVA test was conducted to determine whether ethnicity factor could make any difference to independent and dependent variables. According to the test, Chinese and Malay respondents had a higher mean for all of the variables compared to other ethnicities. This could due to the fact that majority of the respondents were from those ethnicities

**Table 1** Anova Output

Ethnicity	Dimensions							
	PU	PEOU	PS	SI	PV	HP	TC	Behavioral Intention to Adopt
	Mean							
Malay	4.2934	<b>3.8482</b>	4.0000	<b>4.0670</b>	3.9571	4.1250	<b>4.0536</b>	<b>4.3214</b>
Chinese	4.2673	3.8107	<b>4.0171</b>	4.0000	<b>4.0171</b>	<b>4.0321</b>	3.9786	4.2571
Indian	4.1872	3.7328	3.8690	3.9138	3.8207	4.0172	3.8966	4.3103
Maldivian	<b>5.0000</b>	3.5000	4.0000	2.7500	3.8000	5.0000	5.0000	3.0000
Other	3.7662	3.2955	3.4227	3.3295	3.2136	3.8011	3.4034	3.9432
Total	4.1564	3.6950	3.8600	3.8525	3.7940	4.0100	3.8663	4.2075
F-value	4.805942	12.438870	7.530785	8.755764	11.476792	1.728459	8.502221	3.568042
Significance		4.9597E-9	0.000012	0.000002	2.1869E-8	0.145220	0.000002	0.007810

From the total of 200 respondents, 42.50% of the respondent has Bachelor's Degree, followed by 40% with Higher Secondary Education, 14% with Secondary level and only 3.50% with Masters and above. ANOVA

test was conducted to decide how level of education will influence the variables. From the test, it shows that except for perceived value, for all the other variables respondents with educational level of masters and above has the highest mean. This matches with the study by Ataran and Nami (2011) which mentioned that the education level had considerably influenced on technology acceptance. It can be analyzed that GrabPay is the most popular e-wallet used by the respondents. This can be due to the more number of Malaysian respondents among the participant. It can also be known that Apple Pay is also fairly popular among the respondents, which can be used internationally. This therefore means that mobile e-wallet is being used by many all over the world. Other popular e-wallets among the respondents consists of Touch and Go, Uber Pay, Google Wallet and PayPal as well.

#### 4.1. *Factor Analysis*

Factor Analysis is used to identify the factors amongst the selected variables. It simply means that, it is used to moderate the sum of variables. The assists in identifying and to group variables with parallel characteristics together. The examination also supports to find the dominance of the the factors among a large number of variables. Therefore, it is competent in illustrating the observed variance. The variance within the variables which has been accounted for among the extracted factors can be identifies by Communalities. The results of communalities range 0 to 1, Zero indicating no variance within the common factor and 1 indicates common factors justify the variance. The 'Total Variance Explained' demonstrates the Eigenvalues of each of the factors obtained during the analysis. It helps in identifying the accumulative variance of two factors. Moreover, illustrates the percentage of variance attributed to each factor. Factors with Eigenvalue more than 1 is considered a unique factor while Eigenvalue less than one is not considered a unique factor as it does not have enough variance.

#### 4.2. *Perceived Usefulness (PU)*

Factor Analysis is used to identify the factors amongst the selected variables. It simply means Perceived Usefulness has an Initial value of 1 which displays that common factors explain all variance. The table also shows that 'Convenient than visiting bank' has a variance of 72.1% accounted by the extracted factors. It was followed by 'Prefer mobile wallet with more options' with 71.3% variance in extracted factors. It can also be conclude that all other variables also had a variance of more than 50%. The 'Total Variance Explained' shows that first factor of Perceived Usefulness accounts for 64.602% of the variance, which has an eigenvalue of 4.522. The followed have eigenvalues less than 1 and therefore low percentage of variance. All of the variables had a higher absolute value of loading, more than 0.7. This shows that more factors contribute to these variables of Perceived Usefulness.

#### 4.3. *Perceived Ease of Use*

Factor communalities of the independent variable perceived ease of use shows that an initial value of 1. This mean that factors explain all of the variances. Within the individual variables, 'Easier than using cash' has 77.3% accounted by the extracted factors. This was followed by 'Learning new method (of payment) is easy', which has 68.6%. While, all other three factors have a significantly low percentage of variance accounted by external factors. The first factor in the Total Variance Explained accounts for 43.297% variance, with an eigenvalue of 2.165. However, all other factors have an eigenvalue less than 1 with variance less than 20%. The Component Matrix shows the loadings of four variables on one factor extracted. 'Easier than using cash', 'Learning new method (of payment) is easy' and 'Easy to learn' had 87.9%, 82.8% and 70.3% respectively.

#### 4.4. *Perceived Security*

There is an initial value of 1 for the variables of Perceived Security, thus the factors explain all of the variables. According to the table all of the variables had a quite high percentage of extraction. Four out of five variables had more than 80% of variance accounting for extraction. The Total Variance illustrates that first two factors variance is 78.123% with 2.708 eigenvalue. However, other three factors had and eigenvalue less than 1 showing that it is insignificant. For one extracted factor, the Component Matrix shows the loadings of 5 variables representing perceived security. Among those 'Secure to use' had the highest value of loading of 0.787, which means this variable is contributed by more factors.

#### 4.5. *Social Influence*

Social Influence has an Initial value of 1 which displays that common factors explain all variance. The table also shows that 'Recommendation of friends' has a variance of 73.7% accounted by the extracted factors. It was followed by 'Recommendation of family' with 70.4% variance in extracted factors. All other variables also had a higher than 60% variance of extracted factors. First factor of Perceived Usefulness accounts for 69.549% of the variance, which has an eigenvalue of 2.782. The followed has eigenvalues less than 1 and therefore low percentage of variance. The 'Component Matrix' shows loadings of four variables on the factor extracted. All of the variables had a higher absolute value of loading, more than 0.8. This shows that more factors contribute to these variables of social influence.

#### 4.6. *Perceived Value*

Initial value of 1 for the variables of perceived value, which means the common factors explain all variances. 70.6% of the variance in the 'Additional cost is worth the value' is explained by extracted factors. All other variables also had a value higher than 50%. Total Variance shows that the first factor accounts for 61.392% of the variance, which has an eigenvalue of 3.070. All the other factors have an eigenvalue below 1. Therefore, these factors show no significance. The component factor Matrix shows the loadings of five variables on one factor extracted. All of the variables had an absolute value of loading higher than 0.750 which is considered high.

#### 4.7. *Health Precaution*

Initial value of 1 for the variables of perceived value shows that there is an initial value of 1 for the variables of Health Precaution, thus the factors explain all of the variables. According to the table, all of the variables had a quite high percentage of extraction more than 65%. The Total Variance illustrates that first factor variance is 75.499% with 3.020 eigenvalue. However, other three factors had and eigenvalue less than 1 showing that it is insignificant. For one extracted factor, the Component Matrix shows the loadings of 4 variables representing health precaution. All of the variables had an absolute value of loading higher than 0.80 which means this variable is contributed by more factors.

#### 4.8. *Transactional Cost*

Transactional cost has an Initial value of 1 which displays that common factors explain all variance. All of the variables had a higher than 60% variance of extracted factors. The 'Total Variance Explained' shows that first factor of transactional cost accounts for 66.041% of the variance, which has an eigenvalue of 2.642. The followed has eigenvalues less than 1 and therefore low percentage of variance. The 'Component Matrix' shows loadings of four variables on the factor extracted. All of the variables had a higher absolute value of loading, more than 0.70. This shows that more factors contribute to these variables of transactional cost.

#### 4.9. *Cronbach's Alpha*

A Cronbach's alpha ( $\alpha$ ) has been used to "estimate the distribution of variance consistent in a set of test scores" (Brown 2002). The value ranges from 0.00 to 1.00, which measures the scale's internal stability. The most accepted alpha range for Cronbach is from 0.7 to 0.8. Values that are viewed as inaccurate below 0.7 may be attributed to factors such as a lower number of questions, a misunderstanding of the questions and even a poor correlation of the questions. In 1999, according to Kline, the use of the value 0.8 for cognitive and intelligence assessments is the most relevant. 0.7 is considered the best for those who measure the skill. Hence, 0.7 has been acknowledged in this research as psychological hypothesis values are used to account for the diversity. There are 34 items altogether for the 7 variables. According to the table, Perceived Usefulness has the highest Cronbach's alpha ( $\alpha$ ) of 0.908, indicating high level of internal stability or consistency compared to other variables. It is followed by Health precaution (0.891), Perceived value (0.840), (Transactional cost (0.828) and Social influence (0.782) which are in the acceptable limits. However, perceived security (0.622) and Perceived ease of use (0.453) is below the acceptable limit of 0.7, indicating low level of internal consistency which therefore questions the reliability of these variables.

#### 4.10. *Hypothesis Testing*

Hypothesis testing for this research is done by multiple regression analysis. It is a statistical analysis performed to identify the relationship between dependent and independent variables. Multiple regression is used to analyze two effects, the extent to which independent variables can describe a dependent variable and the tendency and



level of affect on the dependent variable due to the independent variables (Neuman & Fawcett, 2002). In this research paper the dependent variable is the Behavioral intention to adopt and the dependent variables are perceived usefulness, perceived ease of use, perceived security, social influence, perceived value. health precaution and transactional cost.

#### 4.11. Summary of Multiple Regression

Multiple R figure is 0.726 (72.6%) which is a positive value. This therefore indicates that the quality of the dependent variable is positive. This also shows there is a positive linear relationship between all the independent variables towards intention to adopt the mobile e-wallet technology after COVID-19. Moreover, the R Square of 0.527 (52.7%), shows that 52.7% of the variance in the consumer's behavior towards adopting the mobile e-wallet can be explained by the 7 independent variables used in this study.

Also, as the R square is less than 1, it signifies that there is a weak linear relationship of the 7 independent variables towards behavioral intention to adopt mobile e-wallet.

Furthermore, the statistical significance of the linear relationship among the 7 independent variables towards intention to adopt mobile e-wallet was examined by using ANOVA test analysis. The test result shows  $P < 0.000$  representing that there is a statistically significance relationship between all the independent variables with the behavioral intention to adopt mobile e-wallet. Therefore, all of the independent variables influence the intention to adopt positively. The results of coefficient of multiple regression is represented as below:

$$\text{Intention to Adopt Mobile e-wallet} = 1.124 + (0.021) \text{PU} + 0.469 \text{PE} + (0.096) \text{PS} + 0.099 \text{SI} + (0.182) \text{PV} + 0.441 \text{HP} + 0.079 \text{TC}.$$

The result also shows that Health Precaution has the highest beta value, indicating it has the highest impact on intention to adopt mobile e-wallet. It can also be concluding that variables, PE, PV and HP coefficient are statistically significantly different to zero as the P-value is less than 0.05. A higher value represents high impact on the dependent variable while lower and negative values represent the opposite. The equation can be presented as below:

$$\text{Intention to Adopt Mobile e-wallet} = 1.124 + (0.021) \text{PU} + 0.469 \text{PE} + (0.096) \text{PS} + 0.099 \text{SI} + (0.182) \text{PV} + 0.441 \text{HP} + 0.079 \text{TC}$$

The result also shows that Health Precaution has the highest beta value, indicating it has the highest impact on intention to adopt mobile e-wallet. It can also be concluding that variables, PE, PV and HP coefficient are statistically significantly different to zero as the P-value is less than 0.05.

## 5 Conclusion

The research also shows that there is a significant relationship between overall (all independent variable) towards the behavioral intention to adopt mobile e-wallet. This is evident from the p-value less than 0.05 ( $P = 0.000$ ) on the multiple linear regression analysis. Therefore, exhibiting that the framework of the research was relevant as the all of the independent variables contributed towards the dependent variable. Hence, the all of the variables are considered when a consumer wants to use the mobile e-wallet, especially after the COVID-19 as the questionnaire emphasized the impact of the pandemic and the adaptation of new normal in all of the responses.

According to this research, it is evident that perceived ease of use has the most significant impact towards the intention of consumers to adopt the mobile e-wallet ( $P = 0.000$ ,  $B = 0.760$ ). This could be because, with the changes in the way of living and new normal it is important for everyone to adopt a method which eases the process of payment. Moreover, with the difficulties mobile e-wallet would be more convenient. The coincides with researches done by Rogers (2010), Ali and Arshad (2016).

The research also found that the variable 'health precaution' had the next highest significant relationship with the behavioral intention to adopt mobile e-wallet ( $P = 0.000$ ,  $B = 0.592$ ). This was a new variable added to the research as it would be factor impacting the behavioral intention when considering the impact of COVID-19. With the safety measures taken to prevent from the virus, it was highly advised by the health professionals to minimize the use of cash. Hence, mobile e-wallet is apt for a situation as such this pandemic.

One of the limitations of the study is the limited amount of time that research was carried out and the small sample size. The sample size of 200 respondents is very limited to identify the behavioural intention of the customers which is not specified to a precise area, meaning the respondents were from all over the world. Therefore, a sample size of 200 respondents is not enough to represent the whole world. Also, within the limited

time of 3-4 weeks it was challenging to get enough respondents for the study. With the current situation all over the world, it was difficult to reach out to more people to get the responses.

Moreover, the study neglected to mention other several external factors that could have been very significant in evaluating the digital e-wallet 's behavioral purpose, such as income level, level of education, urban or rural areas, quality of internet connectivity and access to mobile e-wallet supporting applications. Such variables will have a major impingement.

For this purpose, more thorough work can be done to define the behavioral intention to adopt mobile e-wallet by taking into account the above limitations. It is proposed that a larger sample size with more diversity is the most important factor, so that the findings are more reliable and significant. In addition, adding other related variables that would bring more complexity to the study in defining the key factors.

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