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Research Paper

Do They Really Intend to Adopt E-Wallet? Prevalence Estimates for Government Support and Perceived Susceptibility

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Abstract

This study proposed a novel attempt to explain the effect of government support and individual's perceived susceptibility to COVID-19 in adopting e-Wallet by integrating technology acceptance model (TAM) and health belief model (HBM). A total of 232 valid responses were collected through online survey. The hypotheses were analysed and validated by using the partial least square structural equation modelling (PLS-SEM) approach. The study found that the HBM construct, which is perceived susceptibility, was only mediated by perceived usefulness. Meanwhile, government support was fully mediated by both perceived usefulness and perceived ease of use. The FinTech practitioners should consider the ease of use and usefulness of e-Wallet in fulfilling the needs of the consumers. In addition, instead of subsidising the consumers, the Government should also focus on the public facilities such as the stable connectivity that allow the consumers to stay connected and trust on the connectivity for e-Wallet. This study adopted holistic and integrative modesl which are TAM and HBM to explain the intention to adopt e-Wallet services during COVID-19 pandemic.

Keywords: COVID-19, e-Wallet, TAM, Health belief model, Government support, Perceived susceptibility.

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Introduction

People are more likely to perceive and react to threats during a pandemic such as COVID-19 (SARS-CoV-2 infection). Apart from causing direct repercussions on health, COVID-19 has also caused the downstream consequences for decision-making in businesses during the massive global health crisis (Bavel, 2020). For instance, the fear of SARS-CoV-2 infection has resulted in widespread changes in individual behaviour and routines, including greater usage of smart phones, internet, and mobile payment (m-pay). Thus, it is critical to study the change of consumers' behaviour towards the intention of e-Wallet adoption.

Seeing SARS-CoV-2 can also be transmitted indirectly via fomites, public fear has been stoked that physical money may spread SARS-CoV-2 (Auer et al., 2020). This is because currency notes are often infected with microbiological infections such as Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa, Streptococcus, Klebsiella pneumoniae, and Proteus (Wanjari, 2021). These are all potential risks of transmissible diseases, which may pose serious public health concerns to the population. Additionally, laboratory simulations have shown that human influenza virus, rotavirus, rhinovirus, norovirus, and hepatitis A virus are all capable of being spread through banknotes and coins (Angelakis, 2014). Researchers also discovered that SARS-CoV-2 is more persistent on flat surfaces (Ather et al., 2020), and SARS-CoV-2 virus can survive on banknote surfaces for two days and on coin surfaces for four days (Pal and Bhadada, 2020).

From these, the COVID-19 pandemic highlights the potential growth of digital payments (Auer et al., 2020). The advent of e-Wallet has caused ripples in the financial technology (FinTech) sector, resulting in a fundamental shift in how the financial services sector works. The fastest-growing region of mobile wallet (m-Wallet) in the world is the Southeast Asia (The Star, 2021). Apart from facilitating integration into the contemporary digital economy and cashless society, e-Wallet provided several advantages, including reduction of the need for bank notes or physical money (Uduji et al., 2018). As a result, it might obviate the unnecessary physical visits, bank transfers, or cash transmissions (Revathy and Balaji, 2020), and reduces human interaction. Additionally, transaction costs, such as the cost of withdrawing money from a bank or automatic teller machine (ATM), might be lowered.

Some went farther and argued that promoting contactless FinTech, especially e-Wallet, would aid in minimising the spread of virus and severity (Abu Daqar et al., 2021). As a result, policymakers had encouraged the community to use e-Wallet to mitigate the spread of COVID-19. Malaysia's federal government had rewarded eligible Malaysians by crediting e-money to their preferred e-Wallet service provider through various programmes, including eTunai Rakyat and ePenjana in 2020, and eBelia in 2021. As a consequence of the government's efforts, Aji et al. (2020) indicated that Malaysian Government support (GS) during the pandemic had a significant influence on customers' desire to use e-Wallet. Furthermore, two-fifths of Malaysians had adopted e-Wallet as of June 2020 (Research and Market, 2020) and this placed Malaysia #1 in Southeast Asia nations for e-Wallet adoption (Mastercard Impact Study, 2020).

Despite the growing body of research and greater use of technologies such as e-Wallet due to the black swan of COVID-19, it had come to our notice that there were gaps in these studies that the current study will attempt to fill. Although governments, particularly Malaysia's federal authorities, have incentivised the use of e-Wallet via a variety of economic revitalisation programmes, will the GS directly influence the intention to use e-Wallet? Additionally, although Health Belief Model (HBM) had been extensively utilised in the literature on technology adoption, Alaiad et al. (2019) stated that its primary emphasis had been on the effects on health-related technologies from a health viewpoint.

Puriwat and Tripopsakul (2021) argued that during the COVID-19 pandemic, the perceived threat of COVID-19 might be used as a "push factor" to stimulate the adoption and continued use of contactless payment technology. Nevertheless, there has been relatively few studies incorporate technology-related theories with HBM to explore FinTech adoption. So far, only Aji et al. (2020), Al nawayseh, (2020), and Puriwat and Tripopsakul (2021) had investigated the effect of COVID-19 on FinTech adoption. Moreover, one of the most important drivers of Fintech adoption was GS (Marakarkandy et al., 2017). However, empirical research on the effect of external push factors, i.e., government intervention on individuals' intentions to use FinTech, including e-Wallet is very limited and has not been thoroughly examined by academicians and researchers.

To a larger extent, TAM or HBM cannot stand alone in explaining the intention to use e-Wallet during the COVID-19 pandemic. Therefore, HBM, which is perceived susceptibility (P-Sus), is incorporated with TAM. Current research also aims to uncover variables that affect an individual's desire to use e-Wallet by disentangling diverse paths that may explain the influence of external push factors, i.e., GS (signifies the changes from legal institutional environment) and P-Sus, on the outcome via mediators. This study investigates the dual mediator effects of perceived usefulness (PU) and perceived ease of use (PEOU) as the primary cognitive drivers of e-Wallet use throughout the COVID-19 pandemic, and explains the effects of GS and P-Sus. These indirect pathways will shed new light on the influence of predictors on user intention.

Malaysian Government Incentives in Boosting e-Wallet Adoption

On January 15, 2020, the federal government launched "eTunai Rakyat" and gave the eligible citizens an RM30 e-Wallet credit through the three e-Wallet service providers: Boost, Touch n' Go eWallet, and GrabPay. Following, the Malaysian federal government unveiled the ePENJANA on June 5, 2020, to help revive the local economy, promote safety via contactless payments, and help public health authorities track COVID-19 contacts through the MySejahtera m-App (MOF, 2020). For "eTunai Rakyat", ePENJANA awarded RM50 e-Wallet credit to eligible Malaysians who downloaded the MySejahtera m-App.

In early 2021, the federal government introduced "eBelia", giving eligible Malaysian adolescents a RM150 one-time credit to their e-Wallet accounts: Boost, ShopeePay, Touch'n Go eWallet, or BigPay (MOF, 2021). On May 5, 2021, former PM (eighth PM) Tan Sri Muhyiddin Yassin presented the RM3.5 billion Jaringan Prihatin programme to aid with broadband internet plan subscriptions and mobile smartphone gadget purchases (MCMC, 2021). Muhyiddin also noted that the Government has

launched the Small Entrepreneur Digitisation Empowerment Programme (PUPUK) to encourage digitalisation and improve cashless transaction administration. The Government sets aside RM200 million for MSMEs and RM100 million for SMEs (MCMC, 2021). "eBelia" had been renamed "eBelia Pemerkasa" for youngsters in the same category during the second half of 2021 via Boost, Touch'n Go eWallet, and GrabPay (MOF, 2021).

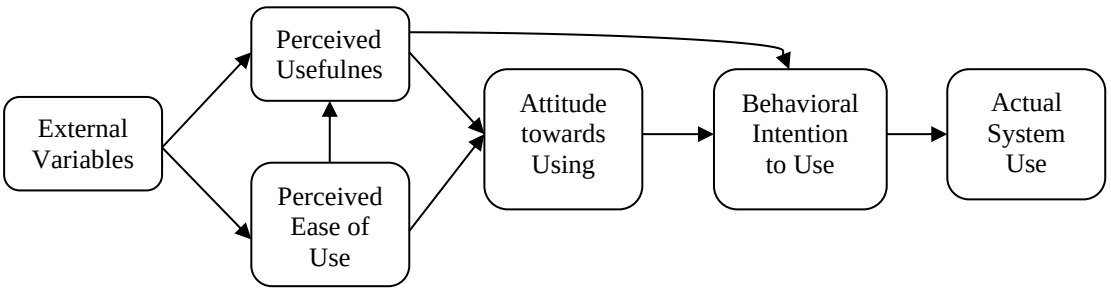
In the similar vein, the Sarawak government had been subsidising contactless payments for small businesses and hawkers starting in 2020. Unlike the federal government, Sarawak's government concentrated on e-Wallet penetration among Sarawakian retailers. In 2020 and 2021, Sarawak government launched "Bantuan Khas Sarawakku Sayang (BKSS) 2.0" and "BKSS 6.0" in which each qualified recipient would receive RM1,500 in two phases (RM3,000 total) through SarawakPay (known as *S* Pay Global since 15 September 2021).

Literature Review

Technology Acceptance Model (TAM)

TAM was hypothesised by Davis (1989) and was a revision of the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975). TAM was then refined by Davis and Venkatesh (1996). TAM was developed to understand the causality of external variables (i.e., objective of system design characteristics, self-efficacy, training, the nature of the implementation process, user involvement in design, and ultimately usage) to people's intention to use and actual adoption of technology innovation in the workplace indirectly via perceived usefulness (PU) and perceived ease of use (PEOU). PU and PEOU are the primary elements in TAM (To and Trinh, 2021).

Figure 1: Technology Acceptance Model (TAM)



Source: Davis et al. (1989).

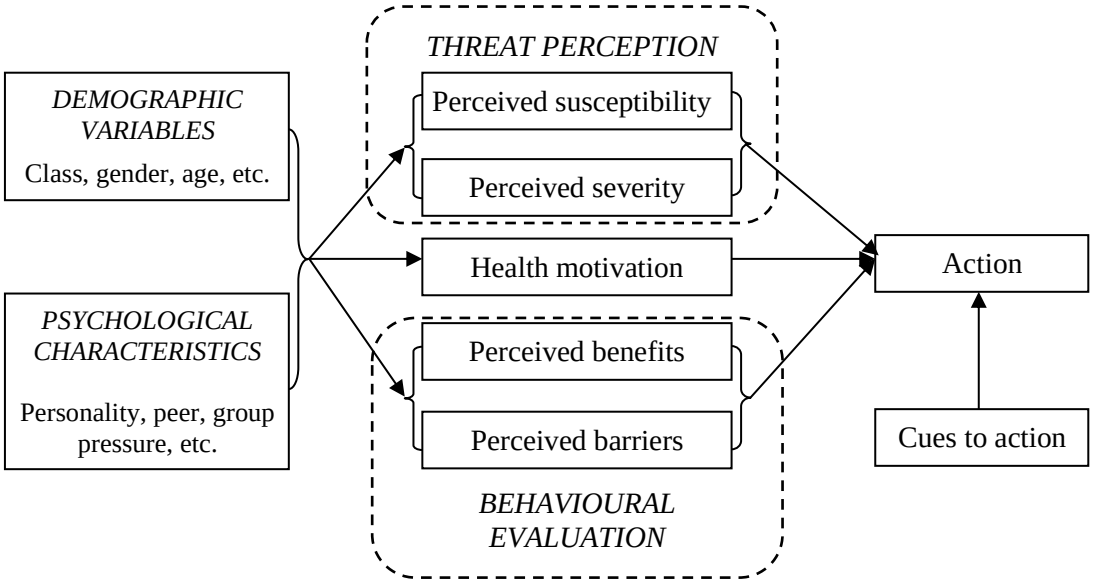
TAM was a well-recognised and widely implemented and validated by lots of researchers as a model to evaluate the significant factors affecting users' technology acceptance (Kim et al., 2017) and often had been utilised in studies of new technological experience and innovation (Pertiwi et al., 2020). In addition, TAM was regarded as a theoretically sound model for identifying the factors of intentions to adopt new technology (Nunes et al., 2018). In recent research, TAM had been utilised to predict the intention to adopt m-Wallet technology (Matemba and Li, 2018; To and Trinh, 2021)

and e-Wallet (Karim et al., 2020; Pertiwi et al., 2020). However, because TAM was first created to explain information system (IS) usage behaviour, it might not contain enough critical characteristics to explain the desire to use e-Wallet during the pandemic. As a result, we adapted TAM by Davis et al. (1989) as in Figure 1 and added P-Sus from HBM and GS into it.

Health Belief Model (HBM)

HBM was established in the early 1950s by a group of psychologists from the U.S. Public Health Service. The rationale of HBM was to comprehend preventative health behaviour based on certain belief patterns and to trigger the health-promoting behaviour (Shmueli, 2021). HBM was commonly used in explaining health behaviour (Sreelakshmi and Prathap, 2020), health-related technology (Wei et al., 2021) and vaccination acceptance, notably influenza vaccine (Shmueli, 2021).

Figure 2: Health Belief Model (HBM)



Source: Adapted from Abraham and Sheeran (2015).

Refer to Figure 2, HBM focused on the cognitive elements that influence a specific health-related behaviour (Shang et al., 2021), such as people's attitudes towards health concerns that focus on threat perception and behavioural evaluation. Threat perception was comprised of two components: perceived susceptibility (P-Sus) to illness or health problems, and perceived severity (P-Sev) of the consequences of illness (Abraham and Sheeran, 2015). If people perceived a risk from a disease or health condition, they would be more prone to engage in a behaviour (Glanz et al., 2008; Orji et al., 2012). Moreover, when appropriate beliefs were held, cues to action might trigger health behaviour (Abraham and Sheeran, 2015).

Integrating the TAM and the HBM

Each of the technology adoption theories might contribute to a better understanding of technology acceptance behaviour in its own way. However, while both TAM and HBM

had benefits, none could explain how people utilise the internet for health-related purposes (Ahadzadeh et al., 2015). Hence, the distinct theories were needed to be modified, combined, or extended in order to comprehend the initial and post-adoption behaviour of technology (Al-Rahmi et al., 2019) in different circumstances. Some scholars had also integrated HBM with TAM, Unified Theory of Acceptance and Use of Technology (UTAUT), Extended Unified Theory of Acceptance and Use of Technology (UTAUT2), Technology Continuous Theory (TCT) or Expectation-Confirmation Model (ECM) to examine the factors impacting the health-related technology and FinTech.

Wei et al. (2021) proposed an integrated UTAUT and HBM model to investigate the factors influencing fitness mobile application (m-app) acceptance. The indirect influence of HBM structures on usage intention had been proven through performance expectation of the application. In terms of the FinTech adoption during COVID-19 pandemic, Sreelakshmi and Prathap (2020) incorporated ECM and HBM to explore the continuing intention to use m-pay technologies. Later, Daragmeh et al. (2021) combined HBM and TCT to evaluate the possibility for customers to continue using an e-Wallet. Sreelakshmi and Prathap (2020) and Daragmeh et al. (2021) concluded that SARS-CoV-2 infection strongly affected adoption/confirmation of m-pay services and current usage of e-Wallet.

TAM had been used to predict technology usage, but it was ineffective for predicting health-related technology use due to its reliance on two primary factors: PU and PEOU (Ahadzadeh et al., 2015). Meanwhile, HBM did not really explain the mechanism or process that leads to the conduct, as HBM attempted to explain the digital or technology adoption purely based on the health perspective (Ahadzadeh et al., 2015). From these, we argued that TAM or HBM cannot explain the behavioural intention to adopt FinTech such as e-Wallet during COVID-19 pandemic independently.

In this research, COVID-19 is deemed as threat to overall health of consumers and adoption of an e-Wallet during the COVID-19 pandemic can be regarded as a protective health. Adoption of an e-Wallet can be viewed as a preventative health behaviour of people in order to spare themselves from the possibility of being infected by COVID-19 through direct contacts with physical money sharing amongst that community. Threat perception of COVID-19, which is P-Sus is employed as an antecedent to explain e-Wallet adoption intention. Simultaneously, the TAM has been investigated by including GS as new endogenous constructs. Therefore, this study integrates TAM, which focuses on PU and PEOU as well as external factor: GS, with HBM, which focuses on health threat prevention. Combining TAM with HBM will contribute to the construction of a more comprehensive model that explains BI for contactless technologies during a pandemic.

Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

PU was defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320). PU was the key determinant of TAM and has a powerful impact on behavioural intention to use (BI) technologies (Chawla and Joshi, 2019; Davis et al., 1989). Previous studies had found that PU strongly predicted BI e-payment (Aji and Dharmmesta, 2019) as well as provided clarity on consumer acceptance of technology or its applications (Hubert et al., 2019). Meanwhile,

PEOU was defined "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320) and was the effort evaluation when a technology is being utilised (Venkatesh, 2000). Moreover, PEOU was significant in determining technology adoption (Leong et al., 2020).

Previous scholars such as Aydin and Burnaz (2016) had highlighted the importance of ease of use and usefulness in attitude development for the case in Turkey. Chawla and Joshi (2019) further proved that PEOU and PU have a significant influence on the consumer attitude and intention to use m-wallet in India. The study of Matemba and Li (2018) also confirmed that PU had a significant positive relationship with people's intentions to adopt WeChat e-Wallet in Johannesburg , South Africa. However, their study was limited only to a single type of e-Wallet player, that is, WeChat e-Wallet.

According to recent research by Karim et al. (2020), there was a significant positive relationship with BI e-Wallet among Malaysia young adults. In the same vein, Yang et al. (2021) also claimed that PEOU and PU displayed a significant positive influence on both BI e-Wallet and e-Wallet adoption in Malaysia. Their data was collected during the COVID-19 pandemic. During the COVID-19 pandemic in Vietnam, Ngo and Nguyen (2021) examined people' intention to use QR code payment technology. One finding was the PEOU positively affects intention of using QR code payment. With India, PU and perceived satisfaction were major predictors of continuation intention (Sreelakshmi and Prathap, 2020).

In summary, past studies had demonstrated the significant of PEOU determining individual's intention to use, adopt, or switch to use technology products/services, as well as PU in determining the intention to use m-pay. Hence, we developed the following hypotheses:

H1 PU has a positive influence on the BI e-Wallet during COVID-19 pandemic.

H2a PEOU has a positive influence on PU.

H2b PEOU has a positive influence on the BI e-Wallet during COVID-19 pandemic.

Perceived Susceptibility (P-Sus)

P-Sus was defined as "a persons' view of the likelihood of experiencing a potentially harmful condition" (Champion, 1984) such as infected by transmissible diseases. To discover the P-Sus to COVID-19 and examine whether it changes the mental and behaviour of people, several studies had been conducted. As postulated in a recent study, Yıldırım and Güler (2020) revealed that P-Sus to COVID-19 had a significant direct influence on the well-being of positivity, death distress, and support. The high P-Sus associated with COVID-19 might increase death distress, reduce happiness and optimistic views of self, life, and the future on the e-business in Malaysia and buying behaviour of the customers had been changed due to COVID-19 (Hasanat et al., 2020). Furthermore, Hasanat et al. (2020) claimed that the economy of the nation and the world had been influenced significantly by COVID-19.

While exploring the antecedents and factors of health-related e-Wallet usage, Aji et al. (2020) found that perceived health risk due to COVID-19 significantly affected customers' intention to use e-Wallet in Malaysia and Indonesia during COVID-19 outbreak. Alwi et al. (2021) further proved that health precaution (as a mean of health precaution to safeguard from the coronavirus) had a significant relationship with the BI e-Wallet. Similarly, Daragmeh et al. (2021) found that P-Sus to COVID-19 increase the intention to use m-pay among Generation X consumers. Moreover, COVID-19 pandemic would generate a higher PU of consumers in using e-Wallet as it can help to reduce the disease transmission (AlRefai et al., 2021).

In addition, HBM constructs had a strong relationship with TCT constructs. For instance, Sreelakshmi and Prathap (2020) found that HBM constructs (i.e., P-Sev, P-Sus, and self-efficacy) affected the adoption/confirmation of mobile-based payment services. P-Sev also had a substantial influence on confirmation and PU (Daragmeh et al., 2021). Meanwhile, uncontrollable external variables (i.e., P-Sev and P-Sus) performed pretty well in short-term adoption (Daragmeh et al., 2021). Therefore, the higher the P-Sus to COVID-19 of the people, the stronger the consumer believe e-Wallet is a useful tool and easy to use for their daily payment transactions. This is because the e-Wallet may assist in the reduction of physical money transactions and minimising the risk of SARS-CoV-2 infection. Based on above literature, we therefore proposed the following hypotheses:

H3a P-Sus has a positive influence on PEOU.

H3b P-Sus has a positive influence on PU.

Government Support (GS)

Credibility and reliability of goods and services might be increased by improving public knowledge of the use of technology in financial innovation and investing in infrastructure by the support of the Government (Hu et al., 2019) such as communication network development, awareness campaign, and subsidy. This means that monetary policy, fiscal policy, and government procurement were all examples of GS to assist the industry (Nelson and Soete, 1988), including making e-Wallet more acceptable to potential consumers.

From the perspective of an e-Wallet, GS covered network infrastructure, package policies, access speed, and security guarantees when conducting digital transactions (Aji et al., 2020). Aji et al. (2020) found that GS had an insignificant direct effect on the desire to use an e-Wallet, but that the effect was entirely mediated by PU. Their research also discovered that Indonesian consumers were relatively likely to utilise e-Wallet with the mediation of PU. This suggests that when the government intervenes positively, customers feel safer. For this reason, GS has been included in TAM to investigate the strength of GS in promoting consumer technology adoption. Based on above argument, we proposed the following hypotheses:

H4a GS has a positive influence on PEOU.

H4b GS has a positive influence on PU.

Mediating Role of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

PU and PEOU were acted as exogenous and endogenous constructs (Hubert et al., 2019) and the establishment of these relationships was depended on the context of the analyses (Mallat et al., 2006). In a recent study by Mutahar et al. (2018), they tested the mediation effect of PEOU and PU with TAM as the core constructs between self-efficacy and the intention. In addition, their study found that self-efficacy had a significant positive impact on the PU and PEOU, while PEOU and PU had a positive direct influence on the intention.

For the case in Malaysia, Leong et al. (2020) investigated the determinants of m-pay behavioural intention in the emerging digital economy in Sarawak. Their analysis also showed PU and PEOU played a mediating role in the relationship between perceived compatibility and m-pay service intention. During COVID-19 pandemic, Aji et al. (2020) found out that PU fully mediated the relationship between GS and intention to use e-Wallet, and partially mediated the relationship between perceived COVID-19 risk and intention to use e-Wallet. Nevertheless, the study found an insignificant direct effect of GS on the BI e-Wallet was mediated by PU. This means the Indonesian consumers were keen to use e-Wallet when GS was felt useful. Similarity, Sreelakshmi and Prathap (2020) revealed that the perceived health threat (both P-Sev and P-Sus) had indirectly affected continuance intention through confirmation, PU, and satisfaction.

Considering that past findings were mixed, the roles of PU and PEOU as mediators in the Malaysian context were being explored further. In addition, based upon the studies by Al-Khowaiter (2020), Karsen et al. (2019) as well as Ramli and Hamzah (2021), there were still a lack of study which investigates PEOU as mediators in TAM studies of e-Wallet. It is critical to determine whether e-Wallet adoption that occurs because of a perceived health threat can be sustained in the long run although most of the people have been given the vaccine to combat with SARS-CoV-2 infection since mid of 2021. While the threat faded and the economy was allowed to continue function normally, the world would return to its "new normal", yet there might linger imprints from the pandemic, such as health consciousness, adoption, or continuation of digital forms of transactions which motivated by its convenience and other considerations (Sreelakshmi and Sangeetha, 2020).

In addition, if consumers lack confidence in utilising technology, particularly if e-Wallet is lacking functionality and difficult to use, technological adoption will not occur despite GS taking place. This is because PU and PEOU are still the primary reasons for them to utilise e-Wallet. Therefore, this study intends to test the influence of a health threat on the BI e-Wallet through PU and PEOU. Mediation analysis was performed to examine the influence of PS on the intention to adopt an e-Wallet via the constructs of PU and PEOU. We further developed the following hypotheses:

H5a GS has a positive influence on BI e-Wallet during COVID-19 pandemic through PU.

H5b P-Sus to COVID-19 has a positive influence on BI e-Wallet during COVID-19 pandemic through PU.

H5c PEOU has a positive influence on BI e-Wallet during COVID-19 pandemic through PU.

H6a GS has a positive influence on PU through PEOU.

H6b P-Sus to COVID-19 has a positive influence on PU through PEOU.

H6c GS has a positive influence on BI e-Wallet during COVID-19 pandemic through PEOU.

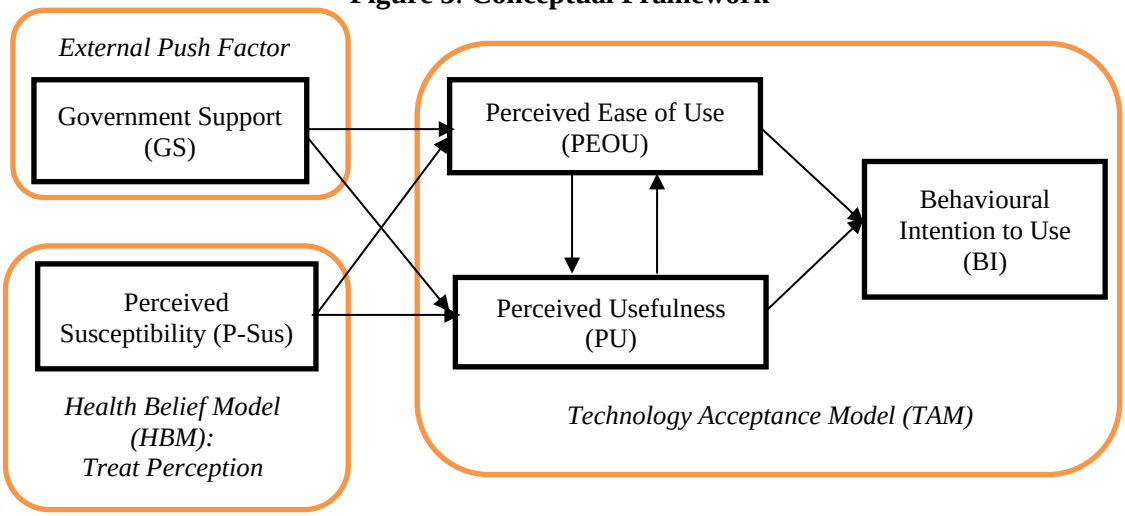
H6d P-Sus to COVID-19 has a positive influence on BI e-Wallet during COVID-19 pandemic through PEOU.

H7a GS has a positive influence on BI through users' beliefs (i.e., PU and PEOU).

H7b P-Sus to COVID-19 has a positive influence on BI through users' beliefs (i.e., PU and PEOU).

Based on the literature review and proposed hypotheses, Figure 3 depicts the conceptual framework of this study.

Figure 3: **Conceptual Framework**



Methodology

Sampling Method and Data Collection

Using a purposive sampling technique, the selection of the sample was the users of e-wallet as this study investigates the continuance usage intention of e-Wallet in the future. Therefore, filtering question was set to exclude the non-users. This study used G*Power to determine the minimum sample size for the statistical procedure. The minimum sample size for this study is 85 respondents with 0.15 effect size, 0.05 alpha value, 0.80 power level, and four (4) predictors. The respondents in this study comprised non-users and low-frequency users for e-Wallet in Sarawak. Online self-administered survey-based questionnaire was used for data collection. We obtained 232 usable samples.

Measurement of Instrument

The survey was divided into three components. Section A was dealing with the demographic profile; and Sections B and C were focused on the exogenous and endogenous variables, respectively. To provide an adequate amount degree of freedom, all variables were assessed by three (3) statements, particularly when converting sample data into their respective groups. In this study, 15 measuring items derived from previous research were employed. A five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree was used to assess agreement or disagreement degree with the measurement questions. Table 1 lists all the mentioned items. The measurement scales were adapted from Aji et al. (2020).

Data Analysis

The PLS-SEM technique was beneficial in explaining behavioural investigations and it might improve the prediction capacity of the structural model (Benitez et al., 2020). Furthermore, PLS-SEM was commonly utilised in exploratory research for theoretical development (Hussain et al., 2018). As a result, smart-PLS version 3.2.7 was used to perform the simulation work in determining the influence of the observable variables and their latent constructs on construction quality.

Results

Demographic of Respondents

Majority of the respondents were female, which showed 53.9% from the overall respondents. Most of the respondents aged between 18 to 25 years old, which were 42.2%. In addition, the Bachelor holders accounted for 41.8% of the overall respondents. Table 2 lists all the details of respondents' profile.

Table 2: Respondents' Profile

Variable	Category	Frequency	Percentage
Gender	Male	107	46.1
	Female	125	53.9
Age	Below 18	5	2.2
	18-25	98	42.2
	26-30	28	12.1
	31-35	29	12.5
	36-40	31	13.4
	41-45	9	3.9
	45 and above	32	13.8
Highest Educational Level	High School	38	16.3
	Diploma	36	15.5
	Degree	97	41.8
	Master	13	5.6
	PhD	7	3.0
	Others	41	17.7

The Assessment of Measurement Model

The results in Table 3 showed that the loading values for all items were ranged from 0.742 to 0.943 or over 0.708 and therefore indicator reliability had been attained. Convergent reliability also had been achieved, as all Average Variance Extracted (AVE) values were greater than 0.5. In addition, Heterotrait-Monotrait (HTMT) ration of correlation in Table 4 was used to verify the discriminant validity of the constructs. All the HTMT values were not surpassed 0.85 (Kline, 2015), which was the threshold value. Thus, discriminant validity also had been obtained for all constructs used in this study.

Table 3: Convergent Validity

Variable	Item	Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
P-Sus	P-Sus 1	0.830	0.915	0.783
	P-Sus 2	0.918		
	P-Sus 3	0.904		
GS	GS 1	0.742	0.853	0.660
	GS 2	0.820		
	GS 3	0.870		
PEOU	PEOU 1	0.912	0.949	0.861
	PEOU 2	0.929		
	PEOU 3	0.943		
PU	PU 1	0.869	0.875	0.701
	PU 2	0.861		
	PU 3	0.779		
BI	BI 1	0.900	0.915	0.782
	BI 2	0.899		
	BI 3	0.852		

Notes: GS = Government Support; BI = Behavioural Intention to Use e-Wallet; PEOU = Perceived Ease of Use; P-Sus = Perceived Susceptibility; PU = Perceived Usefulness.

Table 4: The HTMT Ration of Correlation

Variable	GS	BI	PEOU	P-Sus	PU
GS					
BI	0.580				
PEOU	0.546	0.800			
P-Sus	0.413	0.408	0.250		
PU	0.771	0.737	0.627	0.480	

The Assessment of Structural Model

Prior to the structural model assessment, multicollinearity problem was identified via variance inflation factor (VIF) values. The threshold value was 5.0 (Hair et al., 2017) and the VIF values for all constructs were less than 5.0, which confirmed that there was no collinearity problem. The direct and indirect relationships of the variables were assessed via path coefficient analysis and the estimated results were shown in Table 5.

PU (β = 0.322, p < 0.001) and PEOU (β = 0.538, p < 0.001) were found positively related to BI. PEOU (β = 0.328, p < 0.001) showed positive relationship with PU. GS was positively related to PEOU (β = 0.432, p < 0.001) and PU (β = 0.372, p < 0.001). P-Sus was positively related to PEOU (β = 0.082, p > 0.05) but was not significant. However, P-Sus was found significantly related to PU (β = 0.210, p < 0.001) and the relationship was positive. Therefore, the hypotheses of H1, H2a, H2b, H3a, H3b, and H4b were supported.

The analysis for the mediating role of PU showed that PU mediated the relationships between GS and BI (β = 0.120, p < 0.001), P-Sus and BI (β = 0.068, p < 0.01) as well as PEOU and BI (β = 0.106, p < 0.01). In addition, PEOU was also found mediating the relationships between GS and PU (β = 0.141, p < 0.001) as well as GS and BI (β = 0.232, p < 0.0001) but not for the relationships between P-Sus and PU (β = 0.027, p > 0.05) as well as P-Sus and BI (β = 0.044, p > 0.05). Thus, the hypotheses of H5a, H5b, H5c, H6a, and H6c were supported; and significant relationship also existed. PEOU and PU mediated the relationship between GS and BI (β = 0.03, p < 0.01). Consequently, H7b was supported. In contrast, PEOU and PU did not mediate the relationship between P-Sus and BI, as the relationship was insignificant. Control variables, such as gender and age were included in the analysis. None of the control variables affected the endogenous variables.

Table 5: Path Coefficient and Hypothesis Testing

Hypotheses / Path		**Beta**	**STDEV**	**T-stat**	***P*-values**	**2.50 %**	**97.50 %**	**Decision**	**VIF**	f^2
H1	PU → BI	0.322	0.067	4.784	0.000	0.191	0.452	Supported	1.422	0.174
H2a	PEOU → PU	0.328	0.072	4.527	0.000	0.184	0.460	Supported	1.276	0.163
H2b	PEOU → BI	0.538	0.062	8.689	0.000	0.414	0.655	Supported	1.422	0.486
H3a	GS → PEOU	0.432	0.076	5.698	0.000	0.267	0.564	Supported	1.119	0.213
H3b	GS → PU	0.372	0.081	4.580	0.000	0.213	0.526	Supported	1.357	0.197
H4a	P-Sus → PEOU	0.082	0.074	1.108	0.268	-0.071	0.223	Not Supported	1.119	0.008
H4b	P-Sus → PU	0.210	0.057	3.667	0.000	0.095	0.320	Supported	1.128	0.076
H5a	GS → PU → BI	0.120	0.030	4.057	0.000	0.069	0.185	Supported		
H5b	P-Sus → PU → BI	0.068	0.023	2.984	0.003	0.029	0.121	Supported		
H5c	PEOU → PU → BI	0.106	0.038	2.769	0.006	0.044	0.185	Supported		
H6a	GS → PEOU → PU	0.141	0.045	3.115	0.002	0.064	0.234	Supported		
H6b	P-Sus → PEOU → PU	0.027	0.027	0.987	0.324	-0.018	0.088	Not Supported		
H6c	GS → PEOU → BI	0.232	0.045	5.173	0.000	0.154	0.332	Supported		
H6d	P-Sus → PEOU → BI	0.044	0.040	1.117	0.264	-0.036	0.121	Not Supported		
H7a	P-Sus → PEOU → PU → BI	0.009	0.010	0.873	0.383	-0.005	0.033	Not Supported		
H7b	GS → PEOU → PU → BI	0.046	0.021	2.181	0.029	0.015	0.091	Supported		

Control Variables							
Age → INT	0.044	0.042	1.051	0.293	-0.037	0.126	Not Supported
Gender → INT	0.011	0.046	0.243	0.808	-0.075	0.104	Not Supported

The f^2 values were used to identify the effect size of the predictors. PEOU showed a substantial effect on BI, as the value was 0.486. PU had mediation effect on BI with f^2 value of 0.174. Mediation effect also portrayed by PEOU on PU as the f^2 values were 0.163. GS also possessed mediation effect on PEOU (f^2 = 0.123) and PU (f^2 = 0.197). P-Sus did not have any effect on PEOU with the f^2 value of 0.008, while P-Sus showed a slight effect on PU as the f^2 value was 0.076.

Table 6: Coefficient of Determination and Predictive Relevance

Assessment	**PEOU**	**PU**	**BI**
Coefficient of Determination (R^2)	0.209	0.476	0.578
Predictive Relevance (Q^2)	0.179	0.316	0.446

Table 7: PLSPredict Assessment

Item	**PLS-SEM**		**LM**	**PLS-SEM - LM**
	RMSE	$Q^2_{predict}$	**RMSE**	**RMSE**
BI 2	1.002	0.146	1.020	-0.018
BI 3	0.640	0.173	0.652	-0.012
BI 1	0.752	0.219	0.749	0.003
PEOU 3	0.886	0.149	0.895	-0.009
PEOU 1	0.941	0.136	0.941	0.000
PEOU 2	0.907	0.183	0.907	0.000
PU 3	0.699	0.228	0.693	0.006
PU 1	0.692	0.295	0.698	-0.006
PU 2	0.798	0.260	0.806	-0.008

The R^2 value for PEOU is 0.209, which exhibited that 20.9% of the variation in PEOU was explained by its predictors. There were 47.6% of the variation in PU was explained by its predictors as the R^2 value was o.476. The R^2 value for intention to use e-wallet (BI) was 0.578 and therefore 57.8% of INT was explained by its predictors. Q^2 values (0.179, 0.316, 0.446 for PEOU, PU and BI, respectively) were all greater than zero and therefore confirmed the predictive relevance of dependent and independent variables. The model predictive power was further analysed using PLSpredict, and the results were reported in Table 7.

PLSpredict was performed to verify the predictive power of the model. The degree of predictive errors of the constructs was identified via the endogenous variables, which were, BI, PEOU, and PU. The predictive performance was assessed via the comparison of PLS-SEM model and naïve LM benchmark model. Prediction statistics of root mean squared error (RMSE) were used for the comparison. Majority of the RMSE values of PLS-SEM model were less than the counterpart naïve LM model's RMSE values and therefore PLS-SEM model possessed medium predictive power.

Discussion

PU was found to have a positive direct effect on the BI e-Wallet during COVID-19 pandemic in this study. The finding was consistent with the results of Abd Malik and Annuar (2021). The users will have the tendency to use e-Wallet if they find the usage of e-Wallet benefits them. The finding of PEOU showed a positive direct effect on PU was supported by Daragmeh et al. (2021), in which the users perceived their tasks can be completed more efficiently when it is easy to use a new technology. This study also revealed that PEOU possessed a positive direct effect on the BI e-Wallet during COVID-19 pandemic, which is consistent with the findings of Abd Malik and Annuar (2021). If the users perceived the use of e-Wallet as effortless, they would have the tendency to use e-Wallet.

In the meantime, GS possessed a positive direct effect on PEOU. The finding was consistent with the results of Hai and Alam Kazmi (2015). GS such as information provided by government can improve the user competencies. GS was significantly related to PU, and the relationship was positive. The result was aligned with the finding of Aji et al. (2020) that consumers will perceive e-Wallet as useful with the government provide supports in terms of the policy packages, infrastructure of network, access speed and security.

Meanwhile, P-Sus was found insignificantly related to PEOU. The finding was inconsistent with the study of Moon et al.'s (2020) result that P-Sus was positively related to PEOU. The reason might be due to strategy was yet proposed to change the health-related actions, although equal amount of information had to circulate to the people (Glanz et al., 2015). Contrariwise, this study found that P-Sus had a positive direct effect on PU, which was consistent with the finding of Daragmeh et al. (2021). If the users perceive they are vulnerable to the risk of the pandemic, they will have a positive attitude towards the use of e-Wallet.

For indirect effect analysis, PU was found mediating the effect of GS and P-Sus on the BI e-Wallet during COVID-19 pandemic. The finding was consistent with Aji et al. (2020), in which GS and P-Sus improved the perception of e-Wallet usefulness and the tendency to use e-Wallet is higher. Furthermore, PU was also mediating the relationship between PEOU and the BI e-Wallet during COVID-19 pandemic. The result was in line with the finding of Chawla and Joshi (2020). If the users perceived that to use a new technology was easy, they would also find the technology as very useful to them (Davis et al., 1989) and therefore the increased performance promotes the intention to use.

Another mediator, PEOU, was found mediating the relationship between GS and PU, and effect of GS on the BI e-Wallet during COVID-19 pandemic. In addition, PEOU and PU were found to significantly mediating the relationship between GS and BI e-Wallet. These findings were supported by the proposed framework of Zainab et al. (2015). GS can make devices easily available to the users and subsequently make technology usage easy that leads to reward. The user would perceive a system was useful when reward was related to the enhanced performance due to the use of the system (Davis, 1989). Furthermore, GS is important for enhancing easy technology usage and lead to technology acceptance. The users might perceive the device is easily available and find that the technology is useful due to GS, which contributes to the technology acceptance.

This study also revealed that there was no mediating effect of PEOU between P-Sus and PU. Besides that, both PEOU and PU also did not mediate the relationship between P-Sus and BI e-Wallet during COVID-19 pandemic. The findings were inconsistent with the results of Ahadzadeh et al. (2018) that P-Sus to chronic diseases is related to PEOU. Weidman et al. (2015) and Daragmeh et al. (2021) also suggested PEOU affected on PU and subsequently on the intention to use. The insignificant relationship might be due to self-efficacy of HBM had a stronger effect on PEOU (Weidman et al., 2015; Daragmeh et al., 2021). PEOU also was not mediating the effect of P-Sus on the BI e-Wallet during COVID-19 pandemic. The finding was inconsistent with the results of Moon et al. (2020). Without the planned strategy, this might not motivate the people to use the technology.

Implications for Asian Business

Theoretical Implications

This study contributed to the literature on e-Wallet user's intention by examining the predictors of using e-Wallet during the period of COVID-19 pandemic. During this period, the user behaviour has changed as social contact is restricted. Digitalisation is viewed as one of the preventive measures to curtail the spread of the virus (Daragmeh et al., 2021), which contributed to the increase in using e-Wallet. Therefore, this study investigated the predictors of user's intention that were related to the pandemic.

This study contributed to the literature on user's intention of e-Wallet by combining the HBM and TAM. Since COVID-19 is a catalyst for individuals to embrace contactless payment technology and move towards digital transformations, this study extended the TAM by incorporating it with HBM. Under HBM, P-Sus was incorporated as one of the predictors for intention of e-Wallet. This study echoed past research findings emphasising the role of ICT applications, especially FinTech, in building resilience during public health crises (Pal et al., 2020). Besides, in view of the critical role of Government as a legal organisation that increases e-Wallet penetration, this study also included GS to investigate how it influences on customer e-Wallet intention. This study confirmed the effect of P-Sus and GS on encouraging consumers to use e-Wallet throughout the pandemic.

Next, unlike past research, this study incorporated the mediation effects of PU and PEOU in the testing of the hypotheses. Instead of investigating the direct relation between the independent and dependent variables, this study applied the testing of indirect effects of predictors on response variable by including PU and PEOU separately or by combining PU and PEOU. The present study revealed that GS was mediated by both PEOU and PU meanwhile P-Sus was only mediated via PU. It therefore offered an alternative to previous results and a new contribution to the FinTech adoption literature. Hence, the understanding of the TAM and HBM is enhanced by merging them.

Managerial Implications

Global e-Wallet usage has risen due to the COVID-19 and government subsidies. However, to achieve long-term business strategy and move forwards digital

transformation, it is critical to analyse if consumers really want to adopt e-Wallet due to government backing and their apparent vulnerability to COVID-19. Although Asia has the most advanced Fintech development, notably in China and India, understanding customer needs in a developing market like Malaysia is crucial. This is because the solutions of FinTech, including e-Wallet, are varying across nation. Precisely, FinTech in industrialised nations has a gradual influence on consumers. Meanwhile, FinTech can change lives and unleash a nation's economic development potential in underdeveloped nations. As a result, understanding the motivations for adopting e-Wallet may show specific challenges in the Asian FinTech industry. To establish economies of scale, the e-Wallet business should pay close attention to this.

Transformation of the Asian banking and sharing digital economy may be required to make e-Wallet more accessible and efficient for everybody. Considering ease of use and usefulness are still the most important elements in e-Wallet adoption, the key stakeholders in Asia should coordinate and prioritise consumer sentiment and concerns in business decisions. Furthermore, the banking sector should highlight the benefits of contactless technology and smooth user experiences in their daily lives. To fulfil the needs of its customers, e-Wallet key players should continue to develop in the digital payments industry, particularly in understanding the concept of ease of use and usefulness.

Besides that, to ensure that no one is left behind in the digitalisation revolution, the country's transformation foundations towards an innovative digital economy should be shared by businesses and governments. During a pandemic, the populace needs to know that the government is on their side. Government assistance should include strengthening infrastructure, encouraging innovation, and allowing consumers to attain higher quality of life. Merely subsidies on smart gadgets, e-Wallet credit, and mobile data plan rebates without the backing of a robust connective and usefulness are equivalent to having the nut without the bolt. This is because a cashless society should complement with infrastructures that allow customers to access the internet through smart devices with higher quality and stability. The Government and industry players are critical to increase productivity and ensure the long-term prosperity of the FinTech ecosystem.

Limitations and Future Research Directions

This research has some limitations worth noting. First, the authors focused on respondents in Sarawak. The future study can be generalised throughout Malaysia or other countries with diverse populations and lifestyles for comparison purpose. Second, this research used a cross-sectional design. As a result, it was difficult to predict how COVID-19 risk perception and GS will strengthen the intention to use e-Wallet. Future research can include a longitudinal study to assess how perceptions and use intentions of consumer change. Last but not least, owing to the dynamic business world and highly competitive of e-Wallet market, perceived value can be added as the predictor in the model in the future study to understand how the user compares benefits with sacrifices of e-Wallet.

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