

Factors Affecting Adaptation of E-Wallet among Students in Private Higher Education

By

Asokan Vasudevan

Faculty of Business and Communication, INTI International University, Persiaran Perdana
BBN, Putra Nilai, 71800 Nilai, Negeri Sembilan, Malaysia

*Corresponding author email: asokan.vasudevan@newinti.edu.my

Mohamed Thahir Shajahan

Faculty of Business, Information, and Human Science, Infrastructure University Kuala Lumpur

Toong Hai Sam

Faculty of Business and Communication, INTI International University, Persiaran Perdana
BBN, Putra Nilai, 71800 Nilai, Negeri Sembilan, Malaysia

Ravi Nagarathanam

Imperium International College, Level 1-6, Kompleks Metro Pudu 1 Jalan Metro Pudu 2,
Frase Business Park, 55200 Kuala Lumpur

Sharmila Devi Ramachandaran

Faculty of Business and Communication, INTI International University, Persiaran Perdana
BBN, Putra Nilai, 71800 Nilai, Negeri Sembilan, Malaysia

Xue Ruiteng

Rising Capital Sdn. Bhd., 27-1, Jalan Eco Santuari 8/1C, Persiaran Eco Santuari, 42500,
Telok Panglima Garang, Selangor, Malaysia

Prashanth Beleya

Faculty of Business and Communication, INTI International University, Persiaran Perdana
BBN, Putra Nilai, 71800 Nilai, Negeri Sembilan, Malaysia

Abstract

This study examines factors affecting e-wallet adaptation among private higher education students. Primary data was gathered through survey questionnaires, and 500 questionnaires were circulated to students via google survey. Data was obtained from survey questionnaires and analyzed using the Statistical Package for Social Science (SPSS). A total of 195 valid questionnaires were received, with a response rate of 88.6%. The findings of this study reveal that perceived ease of use is the strongest predictor of e-wallet adoption among students in private universities; this supports the H4. The H3, the social influence positively influences the adoption of e-wallets among students in private universities. However, H1 and H2 found no influence on the adoption of e-wallets among students. The study proved beneficial insight as a starting point for future industrial and academic research on the issue of e-wallet adoption. There were certain drawbacks to the study's execution. Customers are not targeted by the e-wallet because the respondents who participated in the research were young university students, but rather people of all ages. Furthermore, during this study, the researcher faced some challenges by the pandemic, and the questionnaires were linked online through a google survey.

Keywords: e-wallets, security, social influence, perceived ease of use

Introduction

Because of the advantages of mobile phones, their development has resulted in an increase in mobile and tablet users globally. This assertion is consistent with (Boxall, 2015), which noted that, in 2020 and 2021, respectively, 6.1 billion and 6.4 billion people were using smartphones. By 2025, it is anticipated that this figure will increase to 7.33 billion individuals. Liao & Ho (2021) predict that an increase in mobile users would result in an increase in the use of mobile payments, particularly digital wallets or portable wallets like E-wallets. Because it makes the process for customers to pay, exchange cash, or set up instalment payments more effective, quick, and convenient while also representing a significant step towards making Malaysians a cashless society (Blockchains, 2018). (Jayaseelan, 2017).

The initial step of the E-wallet is begun with the start of electronic commerce (e-com), which requires customers and businesses to use online platforms and perform their business trading (Bakar et al., 2020; Alam et al., 2021; Ibrahim et al., 2021). This allows the consumers to perform convenient shopping methods such as products, services and information, electronic banking, and personal financial management (Pawan, 2016; Bapat, 2019; Rashwan et al., 2019; Cera et al., 2020; Wewege et al., 2020) as such, payment methods in e-commerce in the form of money exchange via an electronic form which is known as electronic payments and now known as an e-wallet (Bakar, 2020; Chresentia & Suharto, 2020). The development of the e-wallet relies on reducing operational and payment processing costs, growing online commerce, and decreasing the cost of technology (Alam et al., 2021; Abdul Halim et al., 2021).

Surprisingly, the use of e-wallet among nations are still reported to be low, even in the most developed country (Alam et al., 2021; Yaakop et al., 2021). This statement is similarly mentioned by the European Central Bank, which stated that the use of electronic payment among European is still low. The main reason behind this scenario is the lack of customer demand and the adoption of an electronic payment system. On the other hand, (Pawan, 2016) argued that youths are very attracted to the use of e-wallet applications in their daily life as this generation has occupied with a smartphone and an internet connection, which enable them to perform online purchases, trading, etc. through the available apps (Malik et al., 2021; Cha et al., 2021). Moreover, the banks supported this matter by providing online apps to be downloaded on the smartphone and used for purchasing, paying bills, money transfers, and purchasing cinema and flight tickets (Lyu et al., 2022; Thusi et al., 2020).

In the meantime, a few factors are always associated with using an e-wallet. As such, indicators such as culture perceived security and performance expectancy are some of the factors that can influence the success of the e-payment appropriation because of its instalment purposes, calculations, and e-payment details, the amount of implementation of this instalment approach is ultimately less appealing to the consumer, was investigated previously (Kabir, 2017). Surprisingly, investigation on factors like demography, social influence and ease of utilization which could contribute to the success of e-wallets are still limited, especially from the Malaysian perspective because this ponders points to incorporate Malaysia towards a cashless society as the factors are influencing the adjustment of an e-wallet (Kabir, 2017; Alam et al., 2021). Therefore, this empirical study is keen to investigate based on the objectives below:

- i. To determine the relationship between demography and E-wallet adoption among students in private universities.

- ii. To determine the relationship between security and E-wallet adoption among students in private universities.
- iii. To determine the relationship between social influence and E-wallet adoption among students in private universities.
- iv. To determine the relationship between perceived ease of use and E-wallet adoption among students in private universities.

Literature Review

E-Wallet

An E-wallet is considered an app downloaded on a smartphone, and people utilize it for a contactless money transaction anytime, which comprises the requirement of a few debits and credit cards (Lim et al., 2022; Abhay, 2012). E-wallet comprises high-security highlights compared to a regular wallet, such as a request for a security code (PIN) during a transaction is made beside the card is prepared with a debilitating gadget which off the chance to alter the cards. Online consumers' E-wallet is highly appreciated for stash, palm-sized, mobile, and laptops that are commercially available.

In the meantime, Canada, Sweden, United Kingdom, France, America, China, Australia, Germany, Japan, and Russia are considered cashless nations, besides China being the breadth of use of e-wallets, which may be a fast-developing nation that uses mobile phones for 76% of China's shoppers compared to 36% of the U.S. population (Nag, 2018; Groenfeldt, 2017). Moreover, Indonesia is also another country who had adopted the use of e-wallets. Indonesia can be seen the trade in portable wallets develop significantly, ranging from Indonesian Rupiah 24 billion to Indonesian Rupiah 955 billion between 2013 and 2017, with the support of government policies that advance the growth of e-commerce and mobile access and the promotion of media distribution and payment offices. In 2018, Indonesian Rupiah 1 trillion is estimated to surpass (Global Data Financial Services, 2018).

Demography

When discussing the effect of demographic factors in using e-wallets, gender distinctions should be considered and serve as an imperative driving principle that would influence the inquiry (Shin, 2009; Sun & Zhang, 2006; Ha, Yoon, & Choi, 2007). Concurring to the amplified show connected in Shin (2009) think about, other than the state of mind and behavioural purposeful that will influence the appropriation of E-wallet, details such as gender identity appears to be a unique link. In addition, Ha et al. (2007) also noted that statistical data such as gender, age, and pay of a person capable of strengthening the relationship tried with different models in Korea. Furthermore, Chen and Nath (2008) have found that one of the crucial impacts on the adoption of e-wallets is gender.

Gender and age also being vital parts of demographic factors. More youth shoppers portrayed more online look behaviour compared to seasoned buyers, and when the hunt for the item online benefit was taken into thought, more seasoned customers were more likely to buy once they had looked for the thing online (Shiveen, 2017). Therefore, no significant contrast was noticed in the number of items purchased online categorized by age, even though the exploration for items was more for youth shoppers. These were found to be contradictory to Joines, Scherer & Scheufele (2013), who discovered that age did not influence look behaviour but influenced purchasing behaviour, and more than more experienced consumers were bought by younger shoppers. Prior studies clarify the essential teamwork and leading impact of age on the variables of demography and the use of creativity data (Venkatesh, 2012; Gu et al., 2009;

Venkatesh and Morris, 2000; Venkatesh, 2003). Besides that, Venkatesh et al. (2000) have the sharing age of the lion gathering embracing computers in the USA is 15-17, a long time, taken a long time by a bunch of 26-35 years old. The more young and central age groups are expected to be more uninterested in the selection, while the older age group is expected to be more significant to the non-adopters. Yu (2012) identified that the age factor influenced the relations between performance expectancy, social influence, and individual purpose.

Meanwhile, ethnicity also being an enormous factor influencing the demographic factor because it provides a shared social heritage, a feeling of identity that is transferred from one age to another (Renzetti & Curran, 2010). Society uncovers human reflection and partnership designs (Legoh'erele & Ranchhold, 2009). It is portrayed as values or standards held by communities that influence people's behaviours. Since ethnicity can be a dominant example of culture (Usunier, 2010), people's values, behaviours, and behavioural excitement rely on their ethnicity (Legoh'erele et al., 2009). Therefore, in living in each ethnic gathering, social esteem needs can be seen, and they lead norms to advocate the way of their lives (Schwartz, 2010). This provides the premise of seeing how race impacts the responses of portable users to the system for them-payment. In the meantime, modern Malaysia tends to be an exceptionally changed ethnic system with two majority classes, the Malays, 69.8 per cent, and the Chinese, 22.4 per cent, among examples of plural cultures. There are also 6.8 per cent Indian ethnic root Malaysians (Department of Statistics Malaysia, 2021). Due to the social contrasts within the origins of distinctive communities, there is a discernible nonappearance of homogeneity within the buyers' behaviour in Malaysia. The nature of its residential showcase is exceedingly characterized by the "ethnically fragmented shopper markets" (Mohd. Salleh, Teo & Pecotich 2008).

The control effect of demographic characteristics on the link between manner and behavioural eagerness was explored in Shiveen & Rahela's (2017) research. For internet shops, maintaining customers is a considerable difficulty since, in these situations, the cost of exchange is relatively low, and the competition is mostly absent. Online merchants must carefully consider clients' behavioural preferences to create various client upkeep strategies.

H1:Demography influence E-wallet adoption among students in private universities.

Security

The usage of many modern payment services and activities in e-commerce is hindered by security concerns (Linck, Pousttchi, & Wiedemann, 2007; Pousttchi & Wiedemann, 2007). Similar to this, concerns regarding the security of portable installation systems are among the key factors influencing behaviours (Liébana-Cabanillas, Sánchez-Fernández & Muoz-Leiva, 2014; Linck et al., 2007; Shatskikh, 2013). It is feasible to disregard the flexible instalment systems' objective security as inferior to alternative instalment techniques like online credit cards. A high level of security is provided in pertinent transactions using different cryptographic breakthroughs (Crowe & Tavilla, 2012). However, concerns about the seeming security of portable installation methods, rather than actual security, place restrictions on their use (Kim, Mirusmonov, & Lee, 2010; Linck et al., 2007; Ovum, 2012). Additionally, the sheer number of organizations engaged in flexible instalments—including banks, telecommunications companies, and dealers—could raise public worries about security and security-related issues. The visible construct in the portable installation system combines the impact of risk recognitions with the protection promoted to allay these worries.

According to Junadi & Sfenrianto (2015), security refers to a group of methods and practices used to verify the information's source and make it secure and intelligent to maintain a safe distance from organizational and information issues. It nearly seems like e-payment systems can guarantee purchasers in their trades. Most studies have demonstrated that security may positively influence e-wallet selection (Junadi & Sfenrianto, 2015; Kabir, Saidin & Ahmi, 2017; Batra & Kalra, 2016; Sardar, 2016; Taheam, Sharma, & Goswami, 2016). Using the extended Linked Unified Theory of Acceptance and Use of Technology, Junadi and Sfenrianto (2015) identified the factors affecting Indonesia's choice of the E-Payment System (EPS) (UTAUT). The factors considered here were safety, social impact, surroundings, the expectation of effort, and expectation of execution. This idea is based on indicators intentionally meant to positively influence the receipt of EPS for all computations, which, if E-wallet security is further improved, brutally increases the purposeful usage of EPS.

Additionally, Kabir et al. (2017) talked about the factors that influence the choice of an E-payment. This considers the extension of the written audit on prior inquiries pertinent to the choice of e-payment. There have been 223 publications examined; however, only 77 are experimental works. These studies discovered several factors, including ease of use, affordability, comfort, trust, value, benefit, security, attitude, and awareness, frequently used by prior investigations.

On the other hand, Rathore (2016) investigated the factors that influence customers' e-wallet preferences. Another aspect of this way of thinking is protection. The study demonstrates that although security is the most complex calculation for customers, it is not a broad calculation used to influence consumers when using an e-wallet. If protection issues have been successfully resolved, the opportunity will decline, and e-wallet appropriation will increase. The actions taken at Manikandan and Jayakodi are comparable (2017). Their objectives were to investigate e-wallet customer discernment, factors that affect e-wallet customers, and issues e-wallet customers face. According to Manikandan and Jayakodi, defence, comfort, security, pricing, value, simplicity of use, brand loyalty, and advancement usefulness were all independent factors (2017). Rathore (2016) acquired insightful data from mobile users who used e-wallets for online payments, while Manikandan and Jayakodi (2017) compared these two research since the data was gathered from Chennai city respondents. Security, however, had little impact on how customers felt about using electronic payments. In comparison to security, belief was also a minor consideration in consumer discernment.

H2: Security influence E-wallet adoption among students in private universities.

Social influence

The opinions of the key people in a person's life, such as family, friends, and reference groups, impact how they consciously behave. This explanation, one of the TRA's postulates, encourages comparing the idea of social control within the show's context using arbitrary criteria (Ajzen & Fishbein, 1980). When customers come upon a new, groundbreaking product, they can feel uneasy about it and the results of using it. This weakness can be reduced by learning from the opinions of the people one loves. Compact instalment systems can characterize this impact as how people perceive flexible payment structures in their social circles (Schierz, Schilke, & Wirtz, 2010). Fishbein & Ajzen (1975) defined this phrase as "the recognition of the person that the majority of others who are vital to him think he should or should not do the conduct in question." Experimental evidence supporting this assumption has been found in writing on a variety of modern innovation systems and administrative contexts

(Hu, Poston, & Kettinger, 2011; Leng & Lada, 2011; Venkatesh & Davis, 2000) as well as within the flexible administrative environment (Liébana-Cabanillas et al., 2014; Lu, Yao, & Yu, 2005; Oliveira, Faria, Thomas, & Popovi, 2014).

In the past, there has been some agreement that the social influence communicated positively affects the deliberate use of mobile payments, while other detractors have argued that coordination has little effect. In collaboration with Yang, Lu, Gupta, Cao, and Zhang (2012), they showed how social control incorporates a strong circuitous influence at the start of choice. In order to intentionally achieve the flexible instalment advantage of the company, this is to evaluate variables such as behavioural beliefs, societal influences, and personal traits, commonly lately and after selection in China. The social influence that the analyst is conveying has an indirect impact at the top of the list, employing a favourable influence on the linked advantage and a negative influence on the observed risk. Therefore, social factors have significantly influenced the indirect impacts of past and present users.

In Junadi & Sfenrianto's (2015) analysis, the analyst focused on determining the consumer's intention to use mobile payment in Indonesia. Researchers employed the Unified Theory of Adoption and Use of Technology (UTAUT) to pinpoint the precise result about the factors influencing the identification of mobile payment benefits. The components were social power, culture, defence, and the expectation of success. Social influence typically positively impacts the buyer's intention to utilize the e-payment service.

H3: Social influence of E-wallet adoption among students in private universities.

Perceived Ease of Use

The term "perceived ease of use" refers to the user's perception that a particular structure is straightforward or simple to use (Davis, 1989). They are usually associated with the creation and support of the ease-of-use tool by many researchers within the mobile administration environment (Liébana-Cabanillas et al., 2014; Phonthanakitithaworn, Sellitto, & Fong, 2015; Wang, Wang, Lin, & Tang, 2003). According to linked hypotheses and observational ponders, the ease of use of a technological mechanism affects customers' attitudes about a structure that many people employ passionately (Gefen, Karahanna, & Straub, 2003). Anything more would not be worth doing and would result in an underutilized payment mechanism. Consumers should find the structure comfortable enough for employees concerning their current payment methods. Then, ease can be developed to be significantly better, significantly better, higher, more substantial, improved, higher, or equivalent to other payment methods like credit cards. This feature was one of the essential factors in establishing respect and forming attitudes in mobile payments (Dahlberg & Mallat, 2002; Liébana-Cabanillas et al., 2014; Ovum, 2012).

Consumers are more inclined to embrace it since e-functionality wallets have been demonstrated to be simpler to use. Even though most research has discovered a clear correlation between simplicity and usage, other findings, such as those of Ndubisi, Jantan, and Richardson, do not appear to impact uses (2001) significantly. Numerous researchers have deemed the method's usability compelling when considering its application (Adams, Nelson & Todd, 1992; Davis, 1989; Ramayah, Siron, Dahlan, & Mohammad, 2002; Ramayah & Jantan, 2004; Ramayah & Aafaqi, 2004).

H4: Perceived ease of use influences E-wallet adoption among students in private universities.

As such, based on the analysis of the literature, the framework for the present study has been developed as follows

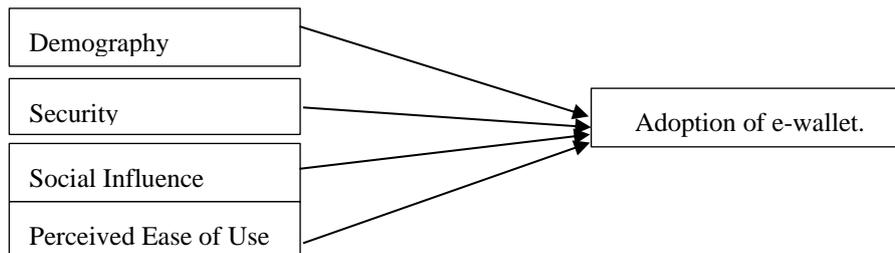


Figure 1: *The Conceptual Framework*

Methods

Participants

This study employed a quantitative research design using a questionnaire to students at private higher education. It allowed the authors to determine the specific and narrow questions besides collecting the data in the form of numbers and conducting an unbiased investigation (Creswell, 2005). Thus, the population of this study is private higher education students between 19 and 26 years old. The study's sample size is 331 respondents, which was determined based on simple random sampling techniques. The samples were chosen based on the sampling table developed by Krejcie and Morgan (1970), and 400 questionnaires were distributed to students in private higher education. The questionnaire was distributed through an online survey, and a link was shared across various platforms such as WhatsApp, LinkedIn, and Facebook. A total of 220 sets were returned, with twenty-five sets being eliminated owing to being unable to pass the clarifying criteria questionnaires from the respondents. As a result, the total number of valid questionnaires is 195, with a response rate of 88.6%.

Regarding gender, 48.7% are males, whereas 51.3% are females. Regarding age groups, the respondents aged 20 to 23 comprise the largest group, accounting for 46.7%. While those aged 24 to 26 accounted for 35.4%, those younger than 19 accounted for 7.2%. Meanwhile, those aged more than 27 years old accounted for 10.8%. Regarding marital status, 92.8% of respondents are single, and 7.2% are single. Most respondents are local ethnic groups comprising 153 participants (78.50%), and only 42 (21.50%) are foreigners. Lastly, 74.9% of the respondent hold bachelor's degree, followed by a diploma is 11.8%, a Master 9.2% PhD is 1.5%, and another education level is only 2.6%.

Table 1 *Respondents' demographic profile*

		Frequency	Percent
Gender	Male	95	48.7
	Female	100	51.3
Age	Less than 19 years old	14	7.2
	20-23 years old	91	46.7
	24-26 years old	69	35.4
	More than 27 years old	21	10.8
Marital Status	Single	181	92.8
	Married	14	7.2
Ethnicity	Local	153	78.5
	Foreigner	42	21.5
	Diploma	23	11.8
Level of Education	Bachelor degree	146	74.9
	Master	18	9.2
	PHD	3	1.5
	Other	5	2.6

Measures

Demography

This construct consists of six items, which are adapted from Junadi & Sfenrianto (2015), Kabir et al. (2017), Sardar (2016), Rathore (2016), Aydin & Burnaz (2016) and Nidhi (2018) using nominal data. An example of an item includes ": i. are you aware of the role of e-wallet, ii. why do you prefer e-wallet over payment methods? iii. how many times do you use your e-wallet in a week? iv. how do you rate the e-wallet service you used? v. would you like to continue using an e-wallet, and vi. what system do you use to pay via e-wallet.". The Cronbach alpha coefficient was .179.

Security

This construct consists of five items, which are adapted from Junadi & Sfenrianto (2015), Kabir et al. (2017), Sardar (2016), Rathore (2016), Aydin & Burnaz (2016) and Nidhi (2018) using the 5-Point Likert Scale, ranging from 1 (strongly disagree) to 5 (strongly agree). An example of an item includes "satisfied with a security system." The Cronbach alpha coefficient was .932.

Social Influence

This construct consists of five items, which are adapted from Junadi & Sfenrianto (2015), Kabir et al. (2017), Sardar (2016), Rathore (2016), Aydin & Burnaz (2016) and Nidhi (2018) using the 5-Point Likert Scale, ranging from 1 (strongly disagree) to 5 (strongly agree). An example of an item includes "people my behaviour think I should use mobile payment". The Cronbach alpha coefficient was .908.

Perceived Ease of Use

This construct consists of five items, which are adapted from Junadi & Sfenrianto (2015), Kabir et al. (2017), Sardar (2016), Rathore (2016), Aydin & Burnaz (2016) and Nidhi (2018) using the 5-Point Likert Scale, ranging from 1 (strongly disagree) to 5 (strongly agree). An example of an item includes "e-wallet is easy to use". The Cronbach alpha coefficient was .901.

Adoption of e-wallet

This construct consists of five items, which are adapted from Junadi & Sfenrianto (2015), Kabir et al. (2017), Sardar (2016), Rathore (2016), Aydin & Burnaz (2016) and Nidhi (2018) using the 5-Point Likert Scale, ranging from 1 (strongly disagree) to 5 (strongly agree). An example of an item includes "e-wallet can substitute cash-based payment method". The Cronbach alpha coefficient was .927.

Data Analysis

The Statistical Packages for Social Sciences (SPSS) version 26.0 was used to analyze the data. Descriptive analyses were used to determine the frequency distribution of the respondents' backgrounds and the understudied characteristics. The links between product price, product quality, online advertisement, and online buying behaviour were then examined using Pearson correlation analysis. Finally, linear multiple regression analysis was performed to investigate the unique predictor of job satisfaction. All statistical tests had a cutoff value of .05, which was used as a measure of significance.

Result

In this research, under the respondent background study, six questions were asked, such as: are you aware of the role of e-wallet, why do you prefer e-wallet over payment methods,

how many times do you use e-wallet in a week, how do you rate the e-wallet service you used, would you like to continue using e-wallet, and what system do you use to pay via e-wallet.

Are you aware of the function of e-wallet?	Fully aware	101	51.8
	Partially aware	84	43.1
	Not aware	10	5.1
Why do you prefer e-wallet over modes of payment?	Time saving	55	28.2
	Ease of use	116	59.5
	Security reason	24	12.3
How many times do you use e-wallet in a week?	Only once	88	45.1
	2-5 times	82	42.1
	More than 5 times	25	12.8
How do you rate the e-wallet service that you have used?	Highly satisfied	47	24.1
	Satisfied	79	40.5
	Neutral	66	33.8
	Unsatisfied	1	0.5
How do you rate the e-wallet service that you used bar chat?	Highly unsatisfied	2	1.0
	Very likely	71	36.4
	Likely	56	28.7
	Neutral	63	32.2
Which device do you use for making the payment via e-wallet?	Unlikely	3	1.5
	Very unlikely	2	1.0
	Smartphone	148	75.9
	Computer	4	2.1
	Both	43	22.1

In this research, six questions were asked under the respondent background study, such as i. are you aware of the function of e-wallet, ii. why do you prefer e-wallet over modes of payment, iii. how many times do you use your e-wallet in a week, iv. how do you rate the e-wallet service you used, v. would you want to continue using an e-wallet, and vi. which device do you use for making the payment via e-wallet?

i. Are you aware of the function of an e-wallet?

One hundred one respondents, 51.8%, are entirely aware of the function of e-wallet, followed by respondents partly aware of the function, with 84 respondents, 43.1%. Finally, ten people, 5.1%) were unaware of the e-wallet feature.

ii. why do you prefer e-wallet over modes of payment?

One hundred sixteen respondents (59.5%) are the highest number of respondents who prefer e-wallets for ease of use, followed by respondents who prefer e-wallet payment over time-saving, with 55 respondents (28.2%). Finally, for security purposes, there are 24 participants (12.3%) who prefer e-wallet payment.

iii. How many times do you use an e-wallet in a week?

Eighty-eight respondents (45.1%) are the highest number of respondents who only use e-wallets once a week, followed by respondents who choose to use only 2-5 days a week, with 82 respondents (42.1%). Finally, 25 respondents (12.8%) chose to use an e-wallet more than five times.

iv. How do you rate the e-wallet service that you used?

Seventy-nine respondents (40.5%) are the highest number of respondents who are pleased with the e-wallet service, according to Table 4.9 and Figure 4.9, followed by respondents who are neutral with the e-wallet service, with 66 respondents (33.8%). Next, 47 respondents who are highly satisfied with the e-wallet took third place in the survey (24.1%). Then, with the e-wallet service, two respondents (1.0%) were strongly dissatisfied. Lastly, one respondent (0.5%) is unsatisfied with the e-wallet service.

V. Would you want to continue using an e-wallet?

Seventy-one respondents (36.4%) are the highest respondents who are very likely to continue using e-wallets, according to Table 4.10 and Figure 4.10, followed by respondents who are neutral in using e-wallets with 63 respondents (33.3%). Fifty-six respondents will likely want to continue using an e-wallet, which took third place in the study (28.7%). Then it is doubtful that 3 respondents (1.5%) want to continue using the e-wallet. Finally, two respondents (1.0%) are very different from each other using e-wallets.

vi. Which device do you use for making the payment via e-wallet?

One hundred forty-eight respondents (75.9%) are the highest number of respondents who use smartphones to make payments via e-wallet, according to Table 4.11 and Figure 4.11, followed by respondents who choose to use both devices to make e-wallet payments, with 43 respondents (22.1%). Finally, four respondents (2.1%) use machines to make payments.

Table 1: Reliability Test

No	Constructs	Cronbach's Alpha	No. of Item
1	Adoption of e-wallet	0.927	5
2	Demography	0.179	5
3	Security	0.932	5
4	Social influence	0.908	5
5	Perceived ease of use	0.901	5

The outcome of the reliability test is shown in Table 1, that four constructs out of five constructs exceeded 0.6 and only one construct less symbolized unsatisfactory internal consistency reliability. The security was determined by five items and reached the highest alpha coefficient of 0.932, as seen in Table 1, followed by the e-wallet acceptance, measured by five items, and the alpha coefficient of 0.927 was achieved. First, five items were measured for social effect, an alpha coefficient of 0.908 was achieved, and five items were measured for perceived ease of use, obtaining an alpha coefficient of 0.901. Finally, demography was calculated by five objects, with an alpha coefficient of 0.179 being achieved.

Table 2: Pearson Correlation Analysis

No	Constructs	Pearson Correlation
1	Demography	0.37
2	Security	0.451
3	Social influence	0.461
4	Perceived ease of use	0.711

The association of each independent variable (demography, protection, social influence and perceived ease of use) is vital at 0.01 levels, two-tailed to student satisfaction, based on table 2. In addition, the outcome also reveals that all independent variables and student satisfaction have a positive relationship. The value between perceived ease of use is 0.711,

while social influence is 0.461 and security is 0.451. The result proved that perceived ease of use shows a most substantial and decisive positive influence on students. As a result, the most positive interaction with the use of e-wallet ($r = 0.711$) is perceived ease of use, followed by social influence ($r = 0.461$) and then security ($r = 0.451$). Finally, demographics positively correlate with e-wallet use ($r = 0.37$).

Table 3: Model Summary

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 ^a	.537	.527	2.67356

a. Predictors: (Constant), Perceived_Ease_of_Use, Demographu, Social_influence, Security
 b. Dependent Variable: Adoption

Table 3 shows that for regression of student acceptance of 0.733, R Square is 0.537. At the same time, the three independent variables affected 53.7% of the difference in the adoption of students (perceived ease of use, demography, social influence, and security). This illustrates that the four independents can predict 53.7% of e-wallet adoption.

Table 4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.753	1.596		3.605	.000
1 Demography	-.249	.141	-.087	-1.767	.079
Security	.065	.063	.062	1.040	.300
Social_influence	.132	.049	.154	2.721	.007
Perceived_Ease_of_Use	.640	.066	.608	9.675	.000

a. Dependent Variable: Adoption

Based on Table 4 above, the following linear equation is formed:

$$\text{Adoption of e-wallet} = 5.752 + (-0.249) (\text{Demography}) + 0.065 (\text{Security}) + 0.132 (\text{Social influence}) + 0.640(\text{Perceived ease of use})$$

The relationship between social influence and perceived ease of use at the level of $p = 0.10$ is significant. If the significant level of security and demographic is just 10%, there is no significant influence on e-wallet adoption. The demographic regression coefficient is -0.249, which shows that when demography decreases by 1 unit, the degree of adoption of e-wallets will decrease - by 0.249 units, while others remain constant. Security has a beta value of 0.065.

Moreover, it means that when safety increases by 1 unit, the level of adoption on e-wallets will increase by 0.065 units while others remain constant. In addition, the social influence coefficient is 0.132, which indicates that when social influence increases by 1 unit, e-wallet adoption will increase by 0.132 units, while others remain constant. Finally, the perceived ease of use has a coefficient of 0.635, which indicates that with each increase of 1 unit of perceived ease of use, the degree of adoption of e-wallets will grow by 0.635, while others remain constant.

Discussion

This study aims to determine the effect of demographic, security, social influence and perceived ease of use factors on e-wallet adaptation among private university students. This

study's results showed that social influence and perceived ease of use are essential factors in adopting e-wallets among students at private universities.

The findings of this study reveal that perceived ease of use is the strongest predictor of e-wallet adoption among students in private universities; this supports the H4. This is linked to the instrumentality of the ease of use construct and is accepted in the sense of mobile services by multiple researchers (Liébana-Cabanillas et al., 2014; Phonthanitithaworn, Sellitto, & Fong, 2015; Wang, Wang, Lin, & Tang, 2003). In addition, several studies have found that the simplicity of the usage of system use is persuasive (Adams, Nelson & Todd, 1992; Davis, 1989; Ramayah, Siron, Dahlan, & Mohammad, 2002; Ramayah & Jantan, 2004; Ramayah & Aafaqi, 2004). Considering its positive effect on convenience, ease of use appears among the central regions to concentrate on improving attitudes among future mobile wallet users. Giving an intuitive and easy-to-use design would increase the framework's tangible utility and the probability of selection. In developing similar software and interfaces, the growing expansion of mobile devices should be held in mind (Aydin and Burnaz, 2016).

The H3, the social influence positively influences the adoption of e-wallets among students at private universities. The conclusion of this analysis is accurate with the findings of researchers such as Yang, Lu, Gupta, Cao & Zhang (2012), suggesting that amid initial acceptance, social influence control includes a significant indirect influence. This research aims to explore determinants that are behavioural belief, social influences, individual characteristics, and purposeful receive at organizing some time recently and after appropriation towards flexible payment gain in China. In the initial pick, the analyst expressed that social influence has a distinctly indirect effect by suggesting emphatically affecting interrelated advantage and adversely affecting seeing chance. Subsequently, social influence was shown to be significant in the coordination effect for the future and current consumers. In thinking about Junadi & Sfenrianto (2015), the researcher pointed out that shoppers using mobile payment in Indonesia aim to assess the social influence of shoppers using e-payment services.

Based on the demographics, H1 does not negatively influence the adoption of e-wallets among students. According to Chen and Nath (2008), that gender is one of the significant effects of e-wallet adoption in the demographic context. Ultimately, education makes people aware of the technical developments that are not readily achievable for illiterate individuals to follow e-wallets (Rahman, 2019). There is a substantial lack of homogeneity of customer behaviour in Malaysia, where 'ethnically segmented consumer markets' strongly characterize the nature of the domestic economy. This strategy will provide the cultural disparity that occurs in the origins of different cultures (Salleh, Teo & Pecotich 2008). In addition, this was supported by Shiveen & Rahela (2017), citing the effect of demographic factors on the interaction between mindset and behavioural intentions. For online retailers, consumer retention is a great challenge as the switching cost is meagre in the online scenario, and the rival is just a click away. Online customers' behavioural intentions need much focus to design different strategies for customer retention by online retailers. Therefore, it concluded that demography is an important attribute and adoption of E-wallets among students.

The finding shows that H2 negatively influences the adoption of e-wallets among university students. Using various cryptography innovations offers a high degree of security in relevant exchanges (Crowe & Tavilla, 2012). Be that as it may, questions about the apparent protection of portable instalment systems, not the actual security, limit the appropriation of such frameworks (Kim, Mirusmonov, & Lee, 2010; Linck et al., 2007; Ovum, 2012). The main worries of consumers are losing cell phones, which is not an uncommon occurrence and character stealing (Gross, Hogarth, & Schmeiser, 2012). In addition, the number of parties

involved in flexible instalments, such as banks, telecommunications firms, and various dealers, could increase security and security-related concerns among the masses. Within the portable instalment system, the effect of chance recognitions and the protection advertised to counter these concerns are considered by the seen construct.

Limitations, Future Research, and Conclusions

The study proved beneficial insight as a starting point for future industrial and academic research on the issue of e-wallet adoption. Nevertheless, there were certain drawbacks to the study's execution. Customers are not targeted by the e-wallet because the respondents who participated in the research were young university students, but rather people of all ages. Customers of different ages have different needs and preferences; consequently, tolerating their assumption or e-wallet may differ from the survey respondents. In addition, it is necessary to conduct a study among Generation Z, Y, X, and baby boomers, on the adoption of new technologies. In this situation, relative to age, generation X and baby boomers, generation Z and Y are much less demanding to adopt and dispatch new technologies. New tech is easy for young people, but it might be a problem for the aged. This will consequently impact the unwavering consistency and accuracy of the option. Furthermore, during this study, the researcher faced some challenges by the pandemic. The questionnaires were linked online through a google survey.

The age brackets and target respondents should be widened in future studies. Future researchers are encouraged to widen the age spectrum of target audiences, not as generation Y and Z, but as generation X, and baby Boomers are too diverse. Different eras of individuals and shoppers developed up with diverse signs of innovation, particularly financial innovation related to e-wallet administrations. Trailblazers can risk a newly produced object, while the underprivileged identify the newly created commodity.

Acknowledgment

The authors offer special gratitude to INTI International University for the opportunity to conduct research and publish the research work. In particular, the authors would like to thank INTI International University for funding to publish this research work.

References

- Abdul-Halim, N. A., Vafaei-Zadeh, A., Hanifah, H., Teoh, A. P., & Nawaser, K. (2021). Understanding the determinants of e-wallet continuance usage intention in Malaysia. *Quality & quantity*, 1-27.
- Abhay Upadhayaya. (2012). Electronic Commerce and E-wallet. *International Journal of Recent Research and Review*, 1, pp.37–41. Retrieved May 14, 2014, from at: <http://www.ijrr.com/papers/8 E-wallet.pdf>
- [Adams, D. A., Nelson, R. R., & Todd, P. A. \(1992\). Perceived usefulness, ease of use and usage of information technology: A replication. *MIS Quarterly*, 6\(2\), 227-247.](#)
- Ajzen, I., & Fishbein, M. 1980, *Understanding Attitudes and Predicting Social Behaviour*, Englewood Cliffs, NJ: Prentice Hall PTR.
- Alam, M. M., Awawdeh, A. E., & Muhamad, A. I. B. (2021). Using e-wallet for business process development: challenges and prospects in Malaysia. *Business Process Management Journal*.

- Aydin, G., & Burnaz, S. (2016). Adoption of mobile payment systems: A study on mobile wallets. *Journal of Business, Economics and Finance*, 5(1), 73-92.
- Bakar, N. A., Rosbi, S., & Uzaki, K. (2020). E-wallet transactional framework for digital economy: a perspective from Islamic financial engineering. *International Journal of Management Science and Business Administration*, 6(3), 50-57.
- Bapat, D. (2019). Exploring antecedents to financial management behavior for young adults. *Journal of Financial Counseling and Planning*, 30(1), 44-55.
- Batra, R., & Kalra, N. (2016). Are digital wallets the new currency?. *Apeejay Journal of Management and Technology*, 11(1), 29-30.
- Boxall, A. (2015). The number of smartphone users in the world is expected to reach a giant 6.1 billion by 2020. Retrieved April 20, 2018, from <https://www.digitaltrends.com/mobile/smartphone-users-number-6-1billion-by-2020>.
- Çera, G., Phan, Q. P. T., Androniceanu, A., & Çera, E. (2020). Financial capability and technology implications for online shopping. *E a M: Economie a Management*.
- Cha, P. S., Cheng, J. Z., Cheu, Z. Y., & Fan, M. K. (2021). The determinants of behavioural intention to adopt e-wallet among the youth in UTAR (Doctoral dissertation, UTAR).
- Chen, L., & Nath, R. 2008, "Determinants of mobile payments: an empirical analysis", *Journal of International Technology and Information*, Vol.17, no.1, pp. 9 – 20.
- Chresentia, S., & Suharto, Y. (2020). Assessing Consumer Adoption Model On E-Wallet: An Extended UTAUT2 Approach. *International Journal of Economics, Business and Management Research*, 4(06), 232-244.
- Crowe, M., & Tavilla, E. 2012, "Mobile Phone Technology: "Smarter" Than We Thought How Technology Platforms are Securing Mobile Payments in the U.S.", Boston, USA. <http://www.bostonfed.org/bankinfo/payment-strategies/index.htm>
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson.
- Dahlberg, T., & Mallat, N. 2002, "Mobile Payment Service Development - Managerial Implications of Consumer Value Perceptions", *Proceedings of the Tenth European Conference on Information Systems*, pp. 649–657.
- Davis, F. D. 1989, "Perceived usefulness, perceived ease of use, and user acceptance of information technology". *MIS Quarterly*, Vol.13, no.3, pp. 319–340.
- Department of Statistics Malaysia. (2015). *General Report of the Population and Housing Census 2000*. Kuala Lumpur: Department of Statistics Malaysia.
- Fishbein, M., & Ajzen, I. 1975, *Belief, attitude, intention, and behavior: an introduction to theory and research* Reading: Addison-Wesley.
- Gefen, D., Karahanna, E., & Straub, D. 2003, "Trust and TAM in online shopping: an integrated model" *MIS Quarterly*, Vol.27, no.1, pp. 51– 90.
- Global Data Financial Services. (2018). Mobile wallet is gradually displacing cash in India, says GlobalData. Retrieved May 28, 2018, from <https://www.globaldata.com/mobile-wallet-gradually-displacing-cashindia-says-globaldata/>
- Graham J. R., Harvey C. R., and Huang H., (2009), "Investor competence, trading Frequency, and home bias," *Management Science*, Vol. 55, No.7, pp.1094-1106.
- Groenfeldt, T. (2017). China leads on mobile wallets-Will others follow?. Retrieved May 29, 2018, from <https://www.forbes.com/sites/tomgroenfeldt/2017/04/26/china-leads-onmobile-wallets-will-others-follow/#2acc23f94537>
- Gross, M. B., Hogarth, J. M., & Schmeiser, M. D. 2012, "Use of Financial Services by the Unbanked and Underbanked and the Potential for Mobile Financial Services Adoption", *Federal Reserve Bulletin*, No.98, pp. 1–20.
- Gu, J-C., Lee, S-C. and Suh, Y-H. (2009) 'Determinants of behavioural intention to mobile banking', *Expert Systems with Applications*, Vol. 36, pp.11605–11616.

- Gumede, V. (2009). 'Demographic Determinants of Financial Risk Tolerance: A South.
- Ha, Yoon, & Choi, 2007. Determinants of adoption of mobile games under mobile broadband wireless access environment. *Information & Management*. v44 i3. 276-286.
- Hu, T., Poston, R., & Kettinger, W. 2011, "Nonadopters of online social network services: Is it easy to have fun yet?", *Communications of the Association of I.S.*, No.29, pp. 441–458.
- Ibrahim, A. I., Hamda, O., & Moreb, M. (2021). The Efficiency of Mobile E-Wallet in Palestine–Case Study. In *2021 International Congress of Advanced Technology and Engineering (ICOTEN)* (pp. 1-5). IEEE.
- Jayaseelan, R. (2017, July 29). The e-wallet race hots up. *The Star Online*. Retrieved May 25, 2018, from <https://www.thestar.com.my/business/businessnews/2017/07/29/the-ewallet-race-hots-up/>
- Joines, J., Scherer, C. and Scheufele, D. (2013), "Exploring motivations for consumer web use and their implications for ecommerce", *Journal of Consumer Marketing*, Vol. 20 No. 2, pp. 90-108.
- Junadi, & Sfenrianto. (2015). A model of factors influencing consumer's intention to use E-payment system in Indonesia. *Procedia Computer Science*, 59, 214-220.
- Kabir, M. A., Saidin, S. Z., & Ahmi, A. (2017). Analysis of factors that influence electronic payment adoption. *Journal of Engineering and Applied Science*, 12(3).
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310-322.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. 2014, Antecedents of the adoption of the new mobile payment systems: The moderating effect of age. *Computers in Human Behavior*, No.35, pp. 464–478.
- Legohérel, P., Daucé, B., Hsu, C. H. C., & Ranchhold, A. (2009). Culture, Time Orientation, and Exploratory Buying Behavior. *Journal of International Consumer Marketing*, 21, 93-107.
- Leng, G., & Lada, S. 2011, "An Exploration of Social Networking Sites (SNS) Adoption in Malaysia Using Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB) And Intrinsic Motivation", *Journal of Internet Banking & Commerce*, Vol.16 No.2, pp. 1–27.
- Lim, X. J., Ngew, P., Cheah, J. H., Cham, T. H., & Liu, Y. (2022). Go digital: can the money-gift function promote the use of e-wallet apps?. *Internet Research*.
- Linck, K., Pousttchi, K., & Wiedemann, D. G. 2007, "Security Issues in Mobile Payment from the Customer Viewpoint", *Proceedings of the 14th European Conference on Information Systems (ECIS 2006)*, pp. 1–12.
- Liao, S. H., & Ho, C. H. (2021). Mobile payment and mobile application (app) behavior for online recommendations. *Journal of Organizational and End User Computing (JOEUC)*, 33(6), 1-26.
- Lu, J., Yao, J. E., & Yu, C. S. 2005, "Personal innovativeness, social influences and adoption of wireless Internet services via mobile technology", *The Journal of Strategic Information Systems*, Vol.14, no.3, pp. 245–268.
- Lyu, V. C., Chin, W., Zhang, H., & Liu, V. (2022). Value added or overload? A study of the countervailing effects of non-core features on mobile banking apps. *Journal of Consumer Behaviour*, 21(3), 602-613.
- Malik, A. N. A., & Annuar, S. N. S. (2021). The effect of perceived usefulness, perceived ease of use, reward, and perceived risk toward e-wallet usage intention. In *Eurasian Business and Economics Perspectives* (pp. 115-130). Springer, Cham

- Manikandan, S., & Jayakodi, J. M. (2017). An empirical study on consumer adoption of mobile wallet with special reference to Chennai City. *International Journal of Research-Granthaalayah*, 5(5), 107-115.
- Mohd. Salleh, A. H., Teo, B., & Pecotich, A. (2008). Malaysia: Consumer behaviour and the future. In A. Pecotich & C. J. Schultz (Eds.), *Marketing and consumer behaviour in East and Southeast Asia*. McGraw-Hill Book Co. Australia Pty Ltd.
- Nag, O. S. (2018). Countries leading the world in cashless transactions. Retrieved March 30, 2018, from <https://www.worldatlas.com/articles/which-are-the-world-s-most-cashless-countries.html>
- Ndubisi, N. D., Jantan, M., & Richardson, S. (2001). Is the Technology Acceptance Model valid for entrepreneurs? Model Testing and Examining Usage Determinants. *Asian Academy of Management Journal*, 6(2), 31-54.
- Nidhi Singh (2018). 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*, 50, 191-205
- Oliveira, T., Faria, M., Thomas, M. A., & Popovič, A. 2014, "Extending the understanding of mobile banking adoption: When UTAUT meets TTF and ITM", *International Journal of Information Management*, Vol.34, no.5, pp. 689–703.
- Ovum. 2012, *Digital Wallet Dynamics*, pp. 1–12. Retrieved from <http://www.mahindracomviva.com/wpcontent/uploads/2015/02/Mahindra-Comviva-Digital-Wallet-Whitepaper.pdf>
- Phonthanitithaworn, C., Sellitto, C., & Fong, M. 2015, "User Intentions to Adopt Mobile Payment Services: A Study of Early Adopters in Thailand", *Journal of Internet Banking and Commerce*, Vol.20, no.1, pp. 1–29.
- Pousttchi, K., & Wiedemann, D. G. 2007, "What Influences Consumers' Intention to Use Mobile Payments?" *LA Global Mobility Round table*, pp. 1–16.
- Ramayah, T. & Aafaqi, B. (2004). Role of self-efficacy in e-library usage among student of a public university in Malaysia. *Malaysia Journal of Library and Information Science*, 9(1), 39-57.
- Ramayah, T., Siron, R., Dahlan, N., & Mohammad, O. (2002). Technology usage among owner/managers of the SMEs: The role of demographic and motivational variables. The proceedings of The 6th Annual Asian-Pacific Forum for Small Business on Small and Medium Linkages, Networking and Clustering, 16-18th October, Kuala Lumpur, Malaysia.
- Ramayah, T., & Jantan, M. (2004). Internet usage among Malaysian students: The role of demographic and motivational variables. *PRANJANA: The Journal of Management Awareness*, 7(2), 59-70.
- Rashwan, H. H. M., Mansi, A. L. M., & Hassan, H. E. (2019). The impact of the E-CRM (expected security and convenience of website design) on E-loyalty field study on commercial banks. *Journal of Business and Retail Management Research*, 14(1).
- Rathore, H. S. (2016). Adoption of digital wallet by consumers. *BVIMSR's Journal of Management Research*, 8(1), 69-75.
- Renzetti, Claire M., & Daniel J. Curran. (2010). *Living Sociology*. Boston, MA: Allyn and Bacon.
- Sardar, R. (2016). Preference towards mobile wallets among urban population of Jalgaon city. *Journal of Management*, 3(2), 1-11.
- Shatskikh, A. 2013, "Consumer acceptance of Mobile Payments in Restaurants". Master Thesis, University of South Florida, Department of Hospitality Administration, (January), pp. 1–57.

- Schierz, P. G., Schilke, O., & Wirtz, B. W. 2010, "Understanding consumer acceptance of mobile payment services: An empirical analysis". *Electronic Commerce Research and Applications*, Vol. 9, no.3, pp. 209–216.
- Schwartz, S. H. (2010). A theory of cultural values and some implications for work. *Applied Psychology: An International Review*, 48(1), 23-41.
- Shin, D.-H. 2009, "Towards an understanding of the consumer acceptance of mobile wallet", *Computers in Human Behavior*, Vol.25, no.6, pp. 1343–1354.
- Shiveen Ansari and Dr. Rahela Farooqi (2017). Moderating effect Of Demographic Variables on Attitude towards Online Shopping: An Empirical Study Using Process. *Journal of Business and Management*, PP 47-54.
- Strydom, B., Christison, A. and Gokul, A. (2009). 'Financial Risk Tolerance: A South African Perspective', School of Economics & Finance, University of KwaZulu- Natal. Working Paper No. 012009.
- Sun and Zhang, 2006. The role of moderating factors in user technology acceptance. *International Journal of Human Computer Studies*. v64 i2. 53-78.
- Sung, J. & Hanna, S. (2016). Factors related to risk tolerance. *Financial Counseling and Planning*, 7, 11-20.
- Taheam, K., Sharma, R., & Goswami, S. (2016). Drivers of digital wallet usage: Implications for leveraging digital marketing. *International Journal of Economic Research*, 13(1), 175-186.
- Thusi, P., & Maduku, D. K. (2020). South African millennials' acceptance and use of retail mobile banking apps: An integrated perspective. *Computers in Human Behavior*, 111, 106405.
- Usunier, J. C. (2010). *Marketing across cultures* (3rd Ed.). Harlow: Prentice Hall Europe.
- Venkatesh, V., & Davis, F. (2000), "A theoretical extension of the technology acceptance model: four longitudinal field studies", *Management Science*, Vol.46, no.2, pp. 186–204.
- Venkatesh, V., Morris, M., Davis, G. and Davis, F. (2003) 'User acceptance of information technology: toward a unified view', *MIS Quarterly*, Vol. 27, No. 3, pp.425–478.
- Venkatesh, V., Thong, J. and Xu, X. (2012) 'Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology', *MIS Quarterly*, Vol. 36, No. 1, pp.157–178.
- Wang, Y.-S., Wang, Y.-M., Lin, H.-H., & Tang, T.-I. 2003, "Determinants of user acceptance of Internet banking: an empirical study", *International Journal of Service Industry Management*, Vol.14, no.5, pp. 501–519.
- Wewege, L., Lee, J., & Thomsett, M. C. (2020). Disruptions and digital banking trends. *Journal of Applied Finance and Banking*, 10(6), 15-56.
- Yang, S. Q., Lu, Y. B., Gupta, S., Cao, Y. Z., & Zhang, R. (2012). Mobile payment services adoption across time: An empirical study of the effects of behavioral beliefs, social influences, and personal traits. *Computers in Human Behavior*, 28(1), 129-142.
- Yaakop, A., Shi, Y., Foster, B., & Saputr, J. (2021). Investigating e-wallet adoption of COVID19 intra-period among Malaysian youths': Integrated task-technology fit and technology acceptance model framework. *International Journal of Data and Network Science*, 5(3), 295-302.
- Yu, C-S. (2012) 'Factors affecting individuals to adopt mobile banking: empirical evidence from the UTAUT model', *Journal of Electronic Commerce Research*, Vol. 13, No. 2, pp.104–121.