

The Relationship between Factors Affecting E-Wallets Adoption among Adults in Kuantan, Pahang

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Abstract: An e-wallet is a digital wallet that allows users to make online purchases using mobile devices. E-Wallets are fully interactive cashless devices that may be used to replace physical cash notes. The primary goal of e-wallets is to make rapid transactions, which discourages individuals from using cash. However, some individuals still lack confidence in electronic payments. This study aimed to examine the relationship between factors affecting e-wallet adoption among adults in Kuantan. This study aims to explore the relationship between perceived ease of use, perceived usefulness, and security and the adoption of e-wallets among adults in Kuantan. The quantitative method was used in this research by using a questionnaire as a research instrument. The questionnaires were distributed to 300 respondents in Kuantan. According to the findings of the descriptive analysis, perceived usefulness was the main factor in e-wallet adoption among adults in Kuantan. Furthermore, perceived ease of use, perceived usefulness, and security have all been found to have a significant relationship with e-wallet adoption. The primary reason for adopting ewallets was that customers found them highly convenient because they were available in many locations around Malaysia. This research provides a better understanding of the adoption of e-wallets. The limitations of this study included the inability to handle the situation, and the quantitative research outcomes were limited. This study provided some recommendations for future studies.

Keywords: Adoption of e-wallets, perceived ease of use, perceived usefulness, security

1. Introduction

Recently, e-wallets are useful and efficient in rising, e-wallet is an electronic wallet that allows users to conduct online transactions using their mobile devices. Consumers may complete purchases more efficiently and swiftly by using their e-wallets (Hossain, 2020). When making purchases on their devices, customers may view their billing and purchase history with just one click by using e-wallets to

keep track of it. An e-wallet may be downloaded to its own smartphone from a website or app store. The personal data of an e-wallet is saved in a software component, and data security and encryption are enabled.

This research focused on the adoption of e-wallets. In Malaysia, e-wallets have become popular as mobile payment options for transactions. Using an e-wallet gives consumers more safety and confidence in their purchasing transactions, convenience, and speed (Seetharaman *et al.*, 2017). This research focused on the factors of e-wallet adoption. Because it replaces the role of the current wallet, the new E-Wallet payment system will help e-commerce grow. Some consumers don't believe in the advantages of using an e-wallet and continue to utilize conventional payment methods like cash, debit cards, credit cards, and cheques.

In this age of advanced tools, the introduction of new innovations benefits consumers. Since adopting E-wallets and other digital payment systems represents a positive technological development that may help to improve society, it is a popular issue that is regularly addressed. E-wallet payment systems allow users to make online purchases and pay utility bills. Nowadays, most E-wallets allow consumers to deposit money in several ways, such as online banking transfers, credit cards, and debit cards. Meanwhile, e-wallet providers promote e-wallet usage with appealing incentives such as cashback, vouchers, and rebates (Chawla & Joshi, 2019). E-wallets have lately gained popularity in Malaysia, where new ones practically appear every year.

A digital cashless that may be used to replace paper bank notes is known as an E-Wallet (Nandhini & Girija, 2019). Electronic wallets have attracted the attention of young people who have attempted to use them to conduct transactions or pay for goods and services. There is a lot of E-Wallet research focused on increasing efficiency, security, and consumer comfort. Customers can use the internet service to manage information associated with purchases and banking information (Salah Uddin & Yesmin Akhi, 2014). Having an electronic wallet available on your mobile device across all digital channels might be convenient and could save you time. However, the most difficult challenges are the safety of the E-wallet and the convenience of payment (Adharsh *et al.*, 2018).

Most customers quickly accept mobile payments, but the risk will be emphasised while online purchases (Amoroso & Magnier-Watanabe, 2012). Some individuals still lack confidence in electronic payments. Hence, many consumers are hesitant to use E-Wallets to make payments or transactions on that platform. This is due to the frequent disruption of online transactions by internet hackers, which leads to the loss of financial data. In addition, specific individuals are still afraid to use e-wallets because they are concerned about the internet's perceived security dangers. The impact of digital technology on Malaysia's payment system is fast increasing. Thus, this study aims to identify the relationship between factors of e-wallet adoption among the adults.

This study focuses on the relationship between factors of E-Wallet adoption among adults in Kuantan. In this study, the researcher aims to identify relationships between factors of adoption and E-Wallet among the adults in Kuantan. Besides that, the researcher can also know what influenced the adoption of E-Wallet among the adults in Kuantan. This study is carried out in Kuantan because there are many adults. This research will give benefit to future researchers and students who intend to do this research on the adoption of E-Wallet. individuals may learn more about E-Wallets and the factors that influence their adoption among adults in Kuantan. Because the E-Wallet has attracted the interest of customers, it will encourage many academics to perform further research on the issue in the future.

2. Literature Review

This chapter aims to provide the evidence of a selected literature review on factors affecting e-wallets adoption among the adults in Kuantan. In this chapter, we will discuss the underlying theories, literature review, conceptual framework, and hypothesis development.

2.1 Underlying Theories

(a) *Technology Acceptance Model (TAM)*

Davis (1989) developed the technology acceptance model (TAM), one of the most extensively used techniques for describing the desire to continue (Foroughi *et al.*, 2019). A theory of information systems called the technology acceptance model (TAM) explains how people come to accept adopting technology. TAM aims to examine the primary use determination to accept or disapprove of a new tool. According to TAM, three aspects explain user motivation, such as perceived usefulness, perceived ease of use, and attitude toward usage (Taherdoost, 2018). An individual's personality determines how motivated they are to use a particular tool. Perceived usefulness (PU) and perceived ease of use (PEOU) are two of the essential individual views surrounding the usage of information technology (IT). This might explain why the person wants to use technology.

Based on Davis (1989), it was shown that perceived usefulness (PU) was the best predictor of one's intent to utilise. The degree to which a person believes that adopting into practise a certain strategy would improve their performance at work is known as perceived usefulness. Perceived ease of use refers to the degree to which a person believes adopting a particular technology would be convenient. The obstacles will be overcome if the technology is simple to use. No one likes it if it's difficult to use and the user experience is confusing. Hence, this study developed a model based on the fundamentals of the primary components connected to TAM to explain the subsequent willingness to use an e-wallets. Furthermore, the major constructs will be explored from the perceptions of system attributes and behavioural assumptions to define the influence of a customer's intention regarding e-wallet systems on consumer satisfaction and their desire to continue using them (Ariffin *et al.*, 2021). Researchers worldwide have used TAM to understand better how different types of information systems are accepted. Patil conducted a review of the literature on digital payment adoption (P. Kumar *et al.*, 2017). According to Janssen (2017), has developed a model of elements associated with people's perceptions of the validity and reliability of services provided through government websites (Janssen *et al.*, 2018).

2.2 Review of Variables

(a) *Adopting e-wallet*

Based on this research, the adoption of adults using E-Wallets depends on the factors considered while using an E-Wallet. A quick and easy method for providing payment services is an e-wallet. A personal banking system that incorporates a phone number and a pay-in option is both convenient and efficient. The level of consumer acceptance of technology is trustworthy under specific criteria and given the intelligent and rapid advancement of technology nowadays. Consider the needs of your customers, as well as technological availability and security (Lai, 2017). Integrating extended TAM theory, consumers will accept more than one type of e-wallets, such as QR Pay, Grab Pay, Boost, and Touch and Go. Social theory can be used to influence acceptance by collecting data from users (Wang, 2017). Furthermore, people throughout the world are becoming more dependent on these technologies and services in their daily lives. This is owing to the e-wallets will provide customers with additional benefits, and most people are more favourable to using it frequently. As a result, many customers prefer to use e-wallet as their primary mode of payment in stores.

(b) *Perceived Ease of Use*

One of the key factors that customers examine when selecting whether or not to embrace technology is its perceived ease of use. The term "ease of use" refers to an individual's perception that using a certain system is easy or very simple (F. D. Davis, 1989). Additionally, the ease of use contributes to both self-efficacy and instrumentality, which have an influence on attitude, as stated by Davis *et al.* (1989) (Ventakesh, Morris, Davis, 2003). On the one hand, intrinsic motivations, which are described as reasons that cause behaviours that are focused on the environment, are motivated by a variety of

elements, one of which is effectiveness. Users' perceptions of a technological system's ease of use have a significant impact on their attitudes and intentions about that technology. Payments done with wireless devices such as mobile phones are more convenient, according to studies, and lower transaction costs may improve electronic payment security (Bezovski, 2016).

Using smartphone technology makes it simple and convenient to access and accept services. When compared to traditional services, where consumers have to wait in long queues to pay for bill payments. According to Bezovski (2016), Customers are more likely to accept a technology if they find it beneficial, convenient, and easy to use. The services provided by digital wallets are satisfactory to their users. Based on the descriptive analysis, perceived ease of use has the significant relationship with the factor affecting e-wallet adoption. E-wallets offer tremendous convenience to Malaysian clients who often shop online. This is because e-wallets always retain financial data in their history, resulting in a speedy and trouble-free transaction.

(c) Perceived Usefulness

One of the most important features of TAM is its perceived usefulness. Perceived usefulness (PU) is described as an individual's belief that utilising a certain program would boost his or her job productivity while also providing sophisticated capabilities that provide exceptional flexibility (Abd Malik, 2019). According to researchers, this is the measure to which a user expects personal gain from electronic payment methods (LIU, 2020). When consumers value new technologies highly, the reasons for which they will be used will become clear. Consumers are more willing to use technology if they feel it is truly beneficial. Therefore, perceived usefulness is linked to behavioural intentions. Numerous researchers have found that perceived usefulness influences users' consumer behaviour when using online payment systems such as e-payment, e-banking, and e-wallets (Cheng *et al.*, 2018). It has been demonstrated that adoption of e-wallets is positively correlated with perceived usefulness (Gia-Shie Liu & Pham Tan Tai, 2016). One's view of usefulness appears to be related to how confident people are in using technology to enhance their careers (Oentario *et al.*, 2017). E-wallet usage is influenced by elements that affect a person's perception of security, such as confidence. System consistency is achieved if the system still performs a useful purpose in one's life. This implies that PU has a significant influence on technological acceptance, which will lead to enhanced performance in future studies. As a result, these users must decide the PU of the E-wallet context.

(d) Security

Security is described as a group of programmers and techniques for assessing data and its sources and safeguarding privacy and integrity to avoid network and data problems (Azman *et al.*, 2022). It's about how e-payment systems safeguard payment information from consumers. E-wallets can also secure consumers while making transactions that are related to security. Security was one of the aspects of the study that was found to be a significant positive factor influencing customers' desire to use an electronic payment system (EPS). This indicates that as the security of electronic wallets improves, the desire to utilise electronic payment methods will also increase. For online transactions to be generally accepted as a form of payment worldwide, electronic payment systems must adhere to a security standard that provides high levels of safety. Security is not the most important element influencing consumer adoption of e-wallets but it is the most challenging one for consumers (Rathore, 2020). If the security concerns are effectively addressed, the adoption of e-wallets will expand, and the risk will decrease. Consumers are concerned about their personal information being stolen and want to ensure that only authorized individuals can access their information. The speed with which transactions are completed and the availability of additional payment choices. It has a greater influence on e-wallet adoption and improves the security of financial transactions (Wulantika & Zein, 2020). The adoption of e-wallets will increase with the improvement of security. Customers that pay using an electronic wallet will receive offers in return. Thus, customers feel more secure and confident when conducting transactions.

2.3 Conceptual Framework

Its shows that perceived ease of use, perceived usefulness and security are the independents variables that influencing adoption of e-wallets in Kuantan, which is the dependent variables.

2.4 Result of Hypothesis

H₁: There is a relationship between perceived ease of use and the adoption of e-wallets.

H₂: There is a relationship between perceived usefulness and the adoption of e-wallets.

H₃: There is a relationship between security and the adoption of e-wallets.

3. Research Methodology

The research methodology section describes all the necessary information that is required to obtain the results of the study. The research methodology consists of detailed information regarding research design, population and sampling, data collection and data analysis.

3.1 Research Design

Specific research designs such as description of research methodology selection, research population, research sampling, research instrument, and research flow process need to be explained clearly. This study relied on descriptive research to define its objectives. This study used a quantitative method because it adopted a non-experimental survey method.

3.2 Data Collection

The questionnaire survey is the main source of data for this study. The questionnaires were used in the previous investigation. The questionnaires were distributed to the adults in Kuantan through online platform which is Google Form. Secondary data is a term used to describe information or data that is already available and accepted for research purposes. Secondary data from journals, online articles, and data from universities is also collected in this study to evaluate the research topic's objectives.

3.3 Research Instrument

Table 1 shows details of instruments used in this study. Perceived ease of use, perceived usefulness was measured using item adopted from Venkatesh and Davis (2000), Daştan & Gürler (2016) and Janteng & Dino (2022). Moreover, security was measured using item adopted from Undale *et al.* (2021). On the other hand, adoption of e -wallet was measured using item adopted from Manikandan & Jayakodi (2017) and Vekatakes, Morris, Davis (2003). The reliability of all the items was valid and acceptable.

Table 1: Research Instrument Questionnaire

Section	Category	N of items	Sources
A (Demographic)		4	
B (Independent Variables)	<ul style="list-style-type: none"> • Perceived Ease of Use • Perceived Usefulness • Security 	<ul style="list-style-type: none"> • 5 • 5 • 5 	(Venkatesh & Davis, 2000) (Daştan & Gürler, 2016) (Janteng & Dino, 2022) (Undale <i>et al.</i> , 2021)

C (Dependent Variables)	• Adoption of e-wallet	5	(Manikandan & Jayakodi, 2017) (Ventakesh, Morris, Davis, 2003) (Ajzen, 1991)
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3.4 Population and Sampling

This research focuses on the relationship between factor of e-wallet adoption among the adults in Kuantan, hence the target population is included the adults in Kuantan. The sample size of this research is determined by the Krejcie and Morgan table which are 384 respondents. There are total 300 respondents participated and answered the questionnaire. Moreover, simple random sample method has been chosen in this study.

3.5 Data Analysis

Descriptive analysis was used to evaluate all of the data from Section A, which included demographic information about the respondents. This analysis was illustrated in the figure, which illustrated the questionnaire results in frequency and percentages. Furthermore, this analysis also used to describe the relationship between the variables. Correlation analysis used to answer the last research question which is to determine the relationship between the factors and the adoption of e-wallets among the adults in Kuantan.

4. Results and Discussion

The results and discussion section presents data and analysis of the study. This section can be organized based on the stated objectives, the chronological timeline, different case groupings, different experimental configurations, or any logical order as deemed appropriate.

4.1 Descriptive Analysis for Demographic Profile

In this demographic analysis, the characteristics consist of gender, age, race and education level. Table 2 shows number pf respondents involved in this research. According to the gender, this study involved 89 males and 211 females. In addition, there are three categories of age group which consist 17 to 19years old, 20 to 22 years old and 23 to 25 years old. The highest group age comes from 20-22 years old resulting in 41.3% and the lowest group of age is 17 to 19 years old which resulting in 26%. Next characteristic in from race. Malay dominates this survey with 35.7% and the lowest is others with only 2%. As the education level, the highest number recorded for Degree with 35.3% while PhD recorded the lowest at 1%.

Table 2: Demographic Analysis

Demographic	Details	Frequency	Percentage (%)
Gender	Male	89	29.7
	Female	211	70.3
Age	17-19 years old	78	26
	20-22 years old	124	41.3
	23-25 years old	98	32.7
Race	Malay	107	35.7
	Chinese	160	53.3

Education Level	Indian	31	10.3
	Others	2	0.7
	SPM	87	29
	STPM/Diploma/Foundation	100	33.3
	Degree	106	35.3
	Master	6	2
	PhD	1	0.3

4.2 Reliability Analysis

Table 3 shows the reliability analysis of pilot test (N=30) and actual study (N=300). The pilot study's Cronbach's alpha value for the dependent variables related to adopting e-wallets is 0.898, which is considered as excellent. Next, the independent variables' Cronbach's alpha values for perceived usefulness, perceived ease of use, and security are 0.864, 0.754, and 0.834 respectively. Therefore, for perceived ease of use and perceived usefulness is excellent while security is good. Hence, the result of Cronbach's alpha value for pilot study is reliable and can be accepted.

Additionally, the actual study was carried out once the pilot study demonstrated that the questionnaires were valid and reliable. The Cronbach alpha value of actual study for adopting e-wallet is 0.676, perceived ease of use is 0.713, perceived usefulness is 0.667 and security is 0.676. Therefore, it is fair. Thus, the result of Cronbach's alpha value for actual study is reliable and can be accepted.

Table 3: The result of reliability test

Variables	N of items	Cronbach's Alpha of Pilot Test (N=30)	Cronbach's Alpha of Actual Test (N=300)
Dependent variable			
Adopting E-wallet	5	0.898	0.676
Independent variables (Factors Affecting E-Wallet Adoption)			
Perceived Ease of use	5	0.834	0.713
Perceived usefulness	5	0.864	0.667
Security	5	0.754	0.676

4.3 Descriptive Analysis

The overall descriptive analytic statistics for this investigation are displayed in Table 4. The total mean for related items for the factors affecting the adoption of e-wallet ranges from 4.2287 to 4.2980, as shown in table 4.4. The standard deviation ranges of the factors of e-wallets adoption are between 0.45197 to 0.47399, which involve perceived ease of use (M = 4.2287, SD = 0.46966), perceived usefulness (M = 4.2980, SD = 0.45197), security (M = 4.2780, SD = 0.47399) and adopting e-wallets (M = 4.2720, SD = 0.45991). The minimum and maximum value for adopting e-wallets are 2.60 and 5.00. Therefore, the overall of central tendency level is high.

Table 4: The result of descriptive analysis data

Item	N	Minimum	Maximum	Mean (M)	Standard Deviation (SD)	Central Tendency Level
Perceived Ease of Use	300	2.60	5.00	4.2287	0.46966	High
Perceived Usefulness	300	3.00	5.00	4.2980	0.45197	High
Security	300	2.00	5.00	4.2780	0.47399	High
Adopting E-Wallets	300	2.60	5.00	4.2720	0.45991	High

4.4 Normality Test

This study involved more than 50 participants. Therefore, Kolmogorov-Smirnov were selected. Kolmogorov-Smirnov states that the dependent variables' significant level displays a p-value of 0.000, suggesting that p is less than 0.05 and demonstrating a non-normal distribution. In this research, a non-parametric method called Spearman correlation analysis was applied since the data were not normally distributed.

Table 5: Result of Normality Test

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Adopting e-wallet	0.150	300	0.000	0.954	300	0.000

4.5 Correlation Analysis

Table 6 shows the Spearman correlation between perceived ease of use, perceived usefulness, security, and the adoption of e-wallets. Based on the table below, there is a positive correlation between perceived ease of use (correlation coefficient=0.470), perceived usefulness (correlation coefficient=0.460), and security (correlation coefficient=0.396). While the significant value of perceived ease of use, perceived usefulness, and security towards the adoption of e-wallets is 0.000, indicating that $p < 0.05$.

Table 6: Results of correlation analysis

Variables	Spearman's rho	
	Correlation coefficient	Significant value (P)
Perceived Ease of Use	0.470**	0.000
Perceived Usefulness	0.460**	0.000
Security	0.396**	0.000

** Correlation is significant at the level of 0.01 (2-tailed)

4.7 Results of Hypothesis

The correlation analysis results show a moderate correlation coefficient between perceived ease of use and perceived usefulness and adopting e-wallets. At the same time, there is a weak correlation coefficient between security and adopting e-wallets. This indicates that there is a relationship between factors of e-wallet adoption. Hence, all of the hypothesis is supported.

5. Conclusion

5.1 Research Objective 1: To examine the relationship between perceived ease of use and the adoption of E-wallets among the adults in Kuantan

The first research objective is to examine the relationship between perceived ease of use and adopting E-wallets among adults in Kuantan. Based on the result, H_{1} is supported, and there is a moderate relationship between perceived ease of use and E-wallet adoption. The result of the correlation coefficient of perceived ease of use has a score of 0.470, which comes within the range of correlation from 0.4 to 0.6. Therefore, there is a moderate relationship between perceived ease of use and adoption of e-wallets.

Many researchers also supported these results that perceived ease of use is the most crucial element when customers embrace an E-wallet, significantly impacting the consumer's purchasing choice. The results of Sarika & Vasantha (2019) show significant disparities between perceived ease of use and e-wallet adoption (Sarika & Vasantha, 2019). Due to the ease of processing payments online, many people will now buy things online. When adopting online banking, younger customers value speed and time savings more than older consumers. Customers that spend money to make online purchases will keep their spending under control. As a result, using e-wallets to make payments online is highly easy and efficient for users to get their goods and services.

5.2 Research Objective 2: To examine the relationship between perceived usefulness and the adoption of E-wallets among the adults in Kuantan

The second research objective is to examine the relationship between perceived usefulness and adopting e-wallets among adults in Kuantan. Based on the result, H2 supported it, and there is a moderate relationship between perceived usefulness and E-wallet adoption. The result of the correlation coefficient of perceived usefulness has a score of 0.460, which comes within the range of correlation from 0.4 to 0.6. Thus, there is a moderate relationship between perceived usefulness and the adoption of e-wallets.

Perceived usefulness demonstrates that it will significantly influence a consumer's perception of an e-wallet. The use of E-wallets will be impacted by the utility of mobile devices, including personalization, ubiquity, localization, timeliness, and network reliability. Users are more likely to embrace new features on their mobile devices if they are valuable to them. If consumers think a product is more helpful, they're more likely to employ it. Findings from research conducted by Mun *et al.* (2017) corroborate the assumption that E-wallet service customers would become more productive and satisfied (Mun *et al.*, 2017).

Additionally, the Technology Acceptance Model explains the correlation between an E-perceived wallet's usefulness and its rate of adoption (TAM). According to Davis (1989), an individual's perceived usefulness is the best indicator of whether they would adopt new information technology. According to this concept, the most important factor in determining whether users in Malaysia would adopt mobile shopping is perceived usefulness. Even though the user finds the device hard to use, they will still use it because it is useful and can make them more efficient. Thus, the most influential element in people switching to using e-wallets is their belief in the technology's value.

5.3 Research Objective 3: To examine the relationship between security and adoption of E-wallets among the adults in Kuantan

The third research objective is to examine the relationship between security and the adoption of e-wallets among the adults in Kuantan. Based on the result, H3 is not supported, and there is not a significant relationship between security and E-wallet adoption. The result of the correlation coefficient of security has a score of 0.396, which comes within the range of correlation from 0.2 to 0.4. Thus, there is a weak relationship between security and the adoption of e-wallets.

The research indicated that security is not a major factor in determining e-wallet adoption. According to Shah *et al.* (2014), there are risks connected with using mobile payment systems like E-wallets because of worries about privacy, the security of transactions, and the disclosure of personal information (Shah *et al.*, 2014). Thus, the majority of consumers are concerned about the security of their financial information if they use an E-wallet. Consumers will first think about its security when deciding whether to embrace a e-wallets.

In addition, there are other precautions consumers must take while selecting an E-wallet for a transaction. If the consumer does not enhance the degree of security, it might be simpler for a hacker to get access to the user's account. However, it will lead to the customer losing their money and any other

sensitive data. Due to this, users should think carefully about the safety of their financial information before adopting the e-wallets.

5.4 Limitation of Study

(a) Inability to handle the situation

Even the actions of the respondents while they complete the survey are beyond our control. Respondents may provide careless responses to a questionnaire that is influenced by the time constraint. Without reading the questions, they may choose the one that seemed appropriate. It will give out inaccurate negative information and affect the analysis. Additionally, some of the questionnaire's questions could be sensitive for responders to answer the question. Respondents can find it uncomfortable to respond. They might not respond in accordance with their own opinions, which will impact the study's findings.

(b) The quantitative research outcomes were limited

In this study, researchers applied a quantitative technique using an online survey questionnaire. This is due to the fact that data collection through surveys is more efficient and requires less time. The questionnaire survey is created using closed-ended questions. They are only given the options of "strongly agree" to "strongly disagree" as possible responses. Respondents cannot provide their ideas and comments because there is no qualitative technique in place. As a result, our study will have limited effectiveness.

5.5 Recommendation of Study

(a) Provide more time

The researcher may distribute surveys in a suitable manner to prevent respondents from being affected by time constraints. The survey should be given to participants a few days to complete. This might stop them from responding quickly when they are stressed for time without attentively reading the question. In addition, the researcher may organize the questions from broadest to most specific. Because of this, the responder is less likely to feel uncomfortable or confused when filling out the survey.

(b) Broaden in demographic scope

The recommendations for future researchers to address the limited demographic is to broaden their studies' scope by including participants from many generations. To overcome the limited demography, it is recommended that future researchers expand the scope of their study to include participants from different generations. Regarding the use of e-wallets, many generations of consumers have differing views. Furthermore, the prospective researcher should perform a study in each state of Malaysia rather than a specific local location. This is because having a large population in the region will result in more reliable statistics.

5.6 Conclusion

The main findings that explain the connection between the dependent and independent variables are also discussed throughout this chapter. The findings indicate a significant correlation between perceived usefulness, perceived ease of use, and security among adults in Kuantan. In addition, the limitations of the study, as well as recommendations, are addressed for consideration in further research. When future researchers begin a new field of study or investigation into e-wallet-related topics, researchers provide the following advice in the hopes that it will assist them in doing a more thorough literature study.

The TAM model was used to study e-wallet adoption variables. This study's findings can provide a realistic view of how these factors influence e-wallet adoption among adults. As part of this study, the first expected outcome is to explore the correlation between perceived ease of use, perceived usefulness, security and e-wallets adoption among adults in Kuantan, with perceived ease of use performing as the most significant influence. It is believed that responsiveness might make it easier to approach a generation and encourage use of e-wallets. By using e-wallets provides you with more flexible means of conducting in-person and online transactions.

This study discovered user views of the system's perceived ease of use, usefulness, and security. This suggests that e-wallet service providers should emphasize security and privacy in their marketing to boost e-wallet reputation. However, perceived usefulness will not affect mobile payment adoption. In conclusion, there is still a lack of studies on the characteristics of e-wallet users in Malaysia. A better understanding of the factors influencing consumers to use an e-wallet can help e-wallet providers and developers improve their applications and better serve their customers. Understanding consumer preferences and developing efficient marketing strategies to promote an e-wallet application with a strong reputation could be improved by the findings of this study. In contrast, e-wallets application should focus on gaining and protecting the users' trust. This is because, by looking for weaknesses, fraudsters frequently target e-wallets and other forms of electronic payment. Therefore, we should log out after each session and restrict e-wallet top-ups to maintain safety.

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References

- Adharsh, R., Harikrishnan, J., Prasad, A., & Venugopal, J. S. (2018). Transformation towards E-Wallet Payment Systems Pertaining to Indian Youth. *International Journal of Pure and Applied Mathematics*, 119(12), 2583–2594.
- Akmal Nashren Abd Malik, S. N. S. A. (2019). The effect of perceived usefulness, perceived ease of use, trust and perceived risk toward E-wallet usage. *INSIGHT Journal*, 5(2600–8564), 1–16.
- Amoroso, D. L., & Magnier-Watanabe, R. (2012). Building a research model for mobile wallet consumer adoption: The case of mobile Suica in Japan. *Journal of Theoretical and Applied Electronic Commerce Research*, 7(1), 94–110. <https://doi.org/10.4067/S0718-18762012000100008>
- Ariffin, S. K., Abd Rahman, M. F. R., Muhammad, A. M., & Zhang, Q. (2021). Understanding the consumer's intention to use the e-wallet services. *Spanish Journal of Marketing - ESIC*, 25(3), 446–461. <https://doi.org/10.1108/SJME-07-2021-0138>
- Azman, H., Sheau Lih, C., & Norbaya Yahaya, S. (2022). Factors Affecting Adoption Of E-Wallet Among Gen Y In Pahang. *Journal of Technology Management and Technopreneurship*, 9(2), 102–112.
- Bailey, A. A., Pentina, I., Mishra, A. S., & Ben Mimoun, M. S. (2017). Mobile payments adoption by US consumers: an extended TAM. *International Journal of Retail and Distribution Management*, 45(6), 626–640. <https://doi.org/10.1108/IJRDM-08-2016-0144>
- Bathinda, A. (2021). *REVIEW ARTICLE SAMPLE SIZE DETERMINATION (FOR DESCRIPTIVE STUDIES) * Simarjeet Kaur. March*, 1–4.
- Batra, R., and, N. K.-A. J. of M., & 2016, undefined. (2016). Are digital wallets the new currency. *Apeejay Journal of Management and Technology*, 11(1), 1–12. <https://ajmt.apeejay.edu/all-issues/vol-11/issue-1/article-4.pdf>
- Bezhovski, Z. (2016). The Future of the Mobile Payment as Electronic Payment System. *European Journal of Business and Management*, 8(8), 127–132.
- Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – An empirical study. *International Journal of Bank Marketing*, 37(7), 1590–1618. <https://doi.org/10.1108/IJBM-09-2018-0256>
- Cheng, F. M., Phou, S., Phuong, S., Fenchi Melissa Cheng, Sambath Phou, and S. P., Cheng, F. M., Phou, S., &

- Phuong, S. (2018). Factors Influencing on Consumer's Digital Payment Adaptation – A Comparison of Technology Acceptance Model and Brand Knowledge. *Proceedings of the 21st Asia-Pacific Conference on Global Business, Economics, Finance & Social Sciences (API8Taiwan Conference)*, 1–16.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Davis, K. J., Balaji, P., & Gurusamy, P. S. (2017). Whether E-Wallets are really a Catalyst towards Expedition of Cashless Economy ? : An Empirical Investigation in the Aftermath of Demonetization. *IOSR Journal of Business and Management*, April, 50–55.
- Foroughi, B., Iranmanesh, M., & Hyun, S. S. (2019). Understanding the determinants of mobile banking continuance usage intention. *Journal of Enterprise Information Management*, 32(6), 1015–1033. <https://doi.org/10.1108/JEIM-10-2018-0237>
- Gefen, karahanna, S. (2003). Trust and tam in online shopping: An integrated Model. *MIS Quarterly: Management Information Systems*, 27(1), 51–90. <https://doi.org/10.1021/es60170a601>
- Gia-Shie Liu, & Pham Tan Tai. (2016). A Study of Factors Affecting the Intention to Use Mobile Payment Services in Vietnam. *Economics World*, 4(6), 249–273. <https://doi.org/10.17265/2328-7144/2016.06.001>
- Hoo, W. C., Yan, J. O. K., Liang, T. P., & Ng, A. H. H. (2021). Age as Moderator between Factors Influencing and Adoption of E-Wallet in Malaysia. *Review of International Geographical Education Online*, 11(8), 1143–1153. <https://doi.org/10.48047/rigeo.11.08.96>
- Hossain, K. & H. (2020). Factors Influencing the Use of E-wallet as a Payment Method among Malaysian Young Adults. *Journal of International Business and Management*, 3(2), 1–11. <https://doi.org/10.37227/jibm-2020-2-21/>
- Jaideep. (2020). Research Design: Introduction, Contents and Types. In *Your Article library* (pp. 1–9). <http://www.yourarticlelibrary.com/marketing/research-design-introduction-contents-and-types/48714>
- Janssen, M., Rana, N. P., Slade, E. L., & Dwivedi, Y. K. (2018). Trustworthiness of digital government services: deriving a comprehensive theory through interpretive structural modelling. *Public Management Review*, 20(5), 647–671. <https://doi.org/10.1080/14719037.2017.1305689>
- Kenton, W. (2020). Population Definition. In *Investopedia* (pp. 1–8). <https://www.investopedia.com/terms/p/population.asp>
- Kim, H.-Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics*, 38(1), 52. <https://doi.org/10.5395/rde.2013.38.1.52>
- Krishna, M. (2017). Product adoption life cycle for Mobile wallets in India. *Noteworthy- The Journal Blog*. <https://blog.usejournal.com/product-adoption-life-cycle-for-mobile-wallets-in-india-5cf45170975b>
- Kumar, P., Dasari, Y., Jain, A., & Sinha, A. (2017). *Digital Nations - Smart Cities, Innovation & Sustainability*. 276–288. <https://doi.org/10.1007/978-3-319-68557-1>
- Kumar, R. (2011). *RESEARCH METHODOLOGY a step-by-step guide for beginners* (3rd ed.). 2005.
- Lai, P. (2017). the Literature Review of Technology Adoption Models and Theories for the Novelty Technology. *Journal of Information Systems and Technology Management*, 14(1), 21–38. <https://doi.org/10.4301/s1807-17752017000100002>
- Manikandan, S., & Jayakodi, J. M. (2017). an Emprical Study on Consumers Adoption of Mobile Wallet With Special Reference To Chennai City. *International Journal of Research -GRANTHAALAYAH*, 5(5), 107–115. <https://doi.org/10.29121/granthaalayah.v5.i5.2017.1843>
- McNaughton, D. B., & Cowell, J. M. (2018). Using methods of data collection. *Advanced Public and Community Health Nursing Practice: Population Assessment, Program Planning and Evaluation, Second Edition*, 38, 127–153. <https://doi.org/10.1891/9780826138446.0006>
- Mohajan, H. (2017). Two Criteria for Good Measurements in Research: Validity and Reliability. *Administrative Science Quarterly*, 36(3), 421–458. <http://www.jstor.org/stable/2393203>
- Mun, Y. P., Khalid, H., & Nadarajah, D. (2017). Millennials' Perception on Mobile Payment Services in Malaysia. *Procedia Computer Science*, 124(January), 397–404. <https://doi.org/10.1016/j.procs.2017.12.170>
- Nandhini, M., & Girija, K. (2019). Customer Perception Regards E-Wallets. *International Journal of Recent Technology and Engineering*, 8(4), 4061–4067. <https://doi.org/10.35940/ijrte.d8528.118419>
- Oentario, Y., Harianto, A., & Irawati, J. (2017). Pengaruh Usefulness, Ease of Use, Risk Terhadap Intentionto Buy Onlinepatisserie Melalui Consumer Attitude Berbasis Media Sosial Di Surabaya. *Jurnal Manajemen Pemasaran*, 11(1), 26–31. <https://doi.org/10.9744/pemasaran.11.1.26-31>
- Otieno, O. C., Liyayla, S., & Odongo, B. C. (2015). Theoretical and Practical Implications of Applying Theory of Reasoned Action in an Information Systems Study. *OALib*, 02(12), 1–5. <https://doi.org/10.4236/oalib.1102054>
- Parampreet Kaur, Jill Stoltzfus, V. Y. (2018). Full Text Introduction. *BIOSTATISTICS*, 4(1), 2010–2012. <https://doi.org/10.4103/IJAM.IJAM>
- Rathore, H. S. (2020). Ff8a52D23D8796479Ef64091Eada09B51C06. *BVIMSR's Journal of Management Research*, 8, 69–75.

- Reserve, T. M. (2022). *The adoption, evolution of e-wallets*. 1.
- Salah Uddin, M., & Yesmin Akhi, A. (2014). E-Wallet System for Bangladesh an Electronic Payment System. *International Journal of Modeling and Optimization*, 4(3), 216–219. <https://doi.org/10.7763/ijmo.2014.v4.376>
- Samsudin, K. B., Awang, M. M. Bin, & Ahmad, A. Bin. (2017). History Teacher Readiness in Applying Historical Thinking Skills in Secondary School. *Yupa: Historical Studies Journal*, 1(2), 113. <https://doi.org/10.26523/yupa.v1i2.42>
- Sarika, P., & Vasantha, S. (2019). Impact of mobile wallets on cashless transaction. *International Journal of Recent Technology and Engineering*, 7(6), 1164–1171.
- Seetharaman, A., Nanda Kumar, K., Palaniappan, S., & Weber, G. (2017). Factors Influencing Behavioural Intention to Use the Mobile Wallet in Singapore. *Journal of Applied Economics and Business Research*, 7(2), 116–136.
- Sekaran, U., & Bougie, R. (2016). Research Methods for Business: A Skill Building Approach. *Angewandte Chemie International Edition*, 6(11), 951–952., 4(1), 1–23.
- Senthilnathan, S. (2019). Usefulness of Correlation Analysis. *SSRN Electronic Journal*, July. <https://doi.org/10.2139/ssrn.3416918>
- Shah, M. H., Peikari, H. R., & Yasin, N. M. (2014). The determinants of individuals' perceived e-security: Evidence from Malaysia. *International Journal of Information Management*, 34(1), 48–57. <https://doi.org/10.1016/j.ijinfomgt.2013.10.001>
- Soodan, V., & Rana, A. (2020). Modeling customers' intention to use e-wallet in a developing nation: Extending UTAUT2 with security, privacy and savings. *Journal of Electronic Commerce in Organizations*, 18(1), 89–114. <https://doi.org/10.4018/JECO.2020010105>
- Taherdoost, Hamed. (2018). A review of technology acceptance and adoption models and theories. In *Procedia Manufacturing* (Vol. 22, pp. 960–967). <https://doi.org/10.1016/j.promfg.2018.03.137>
- Taherdoost, Hameed. (2016). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research Hamed Taherdoost To cite this version : HAL Id : hal-02546796 Sampling Methods in Research Methodology ; How to Choose a Sampling Technique for. *International Journal of Academic Research in Management (IJARM)*, 5(2), 18–27.
- The Star. (2022). *Ageing in a Crisis*. 64(12), 14–15. <http://www.jstor.org.v-ezproxy.brunel.ac.uk:2048/stable/40478053>
- Tiara & Usman. (2020). *Effect of trust, perceived of use, consumer perception, and behavior intention on the use of digital wallet among college students*. 3–6. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3509558
- Us, A., Statement, M., Bank, T., Directors, B. O., Committees, S., Council, S. A., Officers, S., The, O., Policy, W., Bank, V. T., Dan, S., Kijang, L., & Gabenor, P. P. (n.d.). *About the bank*. 2–3.
- Venkatesh & Bala. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, 39(2), 273–315. <https://doi.org/10.1111/j.1540-5915.2008.00192.x>
- Venkatesh, V., & Davis, F. D. (2000). Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Ventakesh, Morris, Davis, & D. (2003). User Acceptance of Information Technology. *International Encyclopedia of Ergonomics and Human Factors, Second Edition - 3 Volume Set*, 27(3), 425–478. <https://doi.org/10.1201/9780849375477.ch230>
- Wang, J. (2017). Why Is Wechat Pay So Popular? *Issues In Information Systems*, 18(4), 1–8. https://doi.org/10.48009/4_iis_2017_1-8
- Wulantika, L., & Zein, S. R. (2020). E-Wallet Effects on Community Behavior. *IOP Conference Series: Materials Science and Engineering*, 879(1). <https://doi.org/10.1088/1757-899X/879/1/012121>
- Zailinawati Abu Hassan, P. S. & D. M. (2006). *Doing a Pilot Study: Why is it essential?* (pp. 70–73).