

**FACTORS AFFECTING ADOPTION OF E-WALLET AMONG
PUBLIC UNIVERSITY STUDENTS IN MELAKA**

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**FACTORS AFFECTING ADOPTION OF E-WALLET
AMONG PUBLIC UNIVERSITY STUDENTS IN MELAKA**

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APPROVAL

I hereby declare that I have read this dissertation/report and in my opinion, this dissertation/report is sufficient in terms of scope and quality as a partial fulfilment the requirements for the award of Bachelor of Technopreneurship with Honours

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DECLARATION OF ORIGINAL WORK

I hereby declared that this report entitled “FACTORS AFFECTING ADOPTION OF E-WALLET AMONG PUBLIC UNIVERSITY STUDENTS IN MELAKA” is the result of my own research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in the candidature of any other degree.

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ABSTRACT

The research is aimed to examine the factors that affect the adoption of E-wallet among public university students in Melaka. The study examines the adoption of E-wallet by including independent variables of perceived usefulness, perceived ease of use, security and trust with the aid of TAM theory. Target respondents that included in the research are students from Universiti Teknikal Malaysia Melaka (UTeM), UiTM Kampus Bandraya Melaka and UiTM Jasin, Melaka equally by collecting data with a total of 242 sets of survey questionnaires. SPSS Software is used to assist in our data analysis along the research. Reliability test, Pearson's Correlation Coefficient and multiple linear regressions are applied in the data analysis. The results concluded that the independent variables of perceived usefulness, perceived ease of use and trust have significance relationship towards adoption of E-wallet among university students. Conversely, security has no significant effect on the acceptance of E-wallet while trust is the dominant factor that affect the e-wallet acceptance among university students. Some limitations and suggestions are included in the study to provide a better idea for future researchers and E-wallet service providers to enhance the adoption of E-wallet in Malaysia.

ABSTRAK

Kajian ini bertujuan untuk mengkaji faktor-faktor yang mempengaruhi penggunaan E-wallet di kalangan pelajar universiti di Melaka. Kajian ini meneliti penggunaan E-wallet dengan memasukkan pemboleh ubah bebas terhadap kegunaan yang dirasakan, yang dianggap memudahkan penggunaan, keselamatan dan kepercayaan dengan bantuan teori TAM. Responden sasaran yang termasuk dalam kajian ini adalah pelajar dari Universiti Teknikal Malaysia Melaka (UTeM), UiTM Kampus Bandraya Melaka dan UiTM Jasin, Melaka sama-sama dengan mengumpul data dengan jumlah 242 set soal selidik. Perisian SPSS digunakan untuk membantu dalam analisis data kami sepanjang penyelidikan. Ujian kebolehpercayaan, pekali korelasi Pearson dan regresi linier berganda digunakan dalam analisis data. Hasilnya menyimpulkan bahawa pemboleh ubah bebas terhadap kegunaan yang dirasakan, kemudahan penggunaan dan kepercayaan yang dirasakan mempunyai hubungan yang signifikan terhadap penggunaan E-wallet di kalangan pelajar universiti. Sebaliknya, keselamatan tidak mempunyai kesan yang signifikan terhadap penerimaan E-wallet manakala kepercayaan adalah faktor dominan yang mempengaruhi penerimaan e-wallet di kalangan pelajar universiti. Sesetengah pengehadan dan cadangan dimasukkan ke dalam kajian untuk memberikan idea yang lebih baik untuk penyelidik masa depan dan pembekal perkhidmatan E-wallet untuk meningkatkan penggunaan E-wallet di Malaysia.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The main reason of this research is to determine the factors affecting the adoption of e-wallets among public university students in Melaka. In chapter one, the researcher had go through every part that demonstrated and interpret a transparent idea for the whole study. Consisted of eight parts, the sections of this chapter will be explained in detail, consisting of theories, research objective, research questions, problem statement, research context, purpose of the analysis and definition of the terms.

1.2 RESEARCH BACKGROUND

Financial Technology (FinTech) is a technology that academics and companies are emphasizing (M. Nabila et al., 2018). The FinTech industry has undergone continuous developments not only to prepare the market for modern-day customers, but also to provide all the conventional services that once called for a visit to the bank to take place at the mobile ease. Fintech's own aim is to increase financial services' efficacy (N. Azizah et al., 2018). Based on the Bank Negara Malaysia (BNM) statistics, there are approximately 30,1 million internet banking subscribers and 15,085,9000 mobile banking subscribers in Malaysia. The latest March 2019 figure shows that Malaysia is steadily using online banking as their method of payment including e-wallet.

Jarunee Wonglimpiyarat (2017) pointed out that FinTech has gained worldwide recognition as the daunting technology which would enable businesses in the twenty-first century to compete effectively. The banking landscape has look on at the emergence of numerous technologies focused on FinTech, such as internet banking, automated teller machine (ATM cash dispenser), international electronic fund transfer Society for Worldwide Interbank Financial Telecommunication (or SWIFT), point-of-sale electronic fund transfer (EFTPOS), Bitcoin wallet, Electronic Data Interchange (EDI), mobile banking, Blockchain finance, crowd funding (Wonglimpiyarat Jarunee, 2017) and the latest one is e-wallet. Any small activity that once occurred within a bank's four walls now occurs as a FinTech Era hallmark between the four edges of a mobile screen when the mobile banking domain is launched.

With the advent of technology in the finance industry, a number of services are branching out. Mobile banking and e-wallets are the top of the list.

B.Pachpande et al. (2018) described a digital wallet as a form of electronic card used for online transactions with the identical purpose like a debit or credit card via a computer or smartphone. For making payments, a digital wallet has to be linked to the individual's bank account. Known as a form of prepaid account that allows a customer to keep their capital for any upcoming online deal and has two software and information components (Pachpande, Bhagyashri R Kamble, Aakash A, 2018).

In support of Sushil Punwatkar & Dr. Manoj Verghese (2018), Amoroso & Watanabe (2012) conducted an empirical study to find that digital payment devices was classified as a group of electronic capital including all non-cash and non-paper payment tools such as plastic cards and direct transfers and all electronic money transactions. Generally, digital wallets are in the type of an embedded microchip or mobile application (Apps) card, whose memory is linked to a bank with enabled debit and credit permissions, known as a 'Float Account' (Sushil Punwatkar & Dr. Manoj Verghese, 2018). This float account is debited at each transaction without the intervention of the issuer. Despite the strong and persistent rise in the use of electronic payment methods worldwide, the penetration of mobile wallets is still far from widespread. There has been an increase in the spread and use of e-wallet or digital wallet as smartphone users (Sushil Punwatkar & Dr. Manoj Verghese, 2018).

Some of the popular e-wallets in Malaysia are:

- **Boost**

Such devices used QR code and in-app purchases as a method of payment. Target prime of Boost customer are smaller stores who play only with the notion of cashless transaction. Boost took an action to make a collaboration which allow customer to pay for parking in the larger KL city. The organization has pursued and successfully targeted vendors across the world. Most specifically, with utilities such as Telekom Malaysia and SYABAS, all in-app bill payments were processed. There are 99 speedmarts, Telekom Malaysia, SYABAS, DBKL Parking among the prominent merchants.

- **GrabPay**

GrabPay also used QR code and in-app purchases as a payment method, including boosting devices. GrabPay has the advantage of being part of the Grab Platform's ecosystem, essentially allowing it to be used to call or order a Grab Food trip. It also

has a relationship with MayBank that accepts MayBank Pay for cross-platform use by merchants. While this app is available throughout Southeast Asia, GrabPay does not translate credits into local currencies. This means consumers will have to update their credit manually while traveling. TeaLive, Inside Scoop and Manhattan Fish Market are their prominent merchants.

- **BigPay**

BigPay (rebranded Tune Card) is the cashless move of AirAsia Bhd, holding 75% of BigPay. Through Mastercard, BigPay will collaborate and tap AirAsia's 63 million customer base to expand its use.

- **AEON Wallet**

Known as one of Malaysia's largest retail companies, AEON comes with the new Visa Prepaid Card e-wallet that created by AEON Credit Service.

- **WeChat Pay**

WeChat announced that Malaysia had twenty million WeChat enjoyers and that Malaysia was the first country to receive an e-money license outside China. WeChat Pay develops and operates directly in Malaysia through partnerships with different bank acquirers. For example, iPay88, MOL Pay and Hong Leong Bank.

- **Touch' n Go eWallet**

The new Touch'n Go-Ant Financial (Alibaba) e-wallet partnership is a joint venture. Recently, TNG has announced that it exceeds one million customers and has a branding edge as well as usability in case use such as toll, parking, bus payment and other public transport.

1.3 PROBLEM STATEMENT

This study aims in demonstrating the recognition of factors affecting the use of e- wallet in students of public universities, whom majority are students with higher spending power of the younger generation.

Based on the Department of Statistics Malaysia, Malaysia was forecast to be the largest segment in 2018, consisting of 32.4 million people, 69.7 percent of Malaysia's population were young adults. Therefore, university students will be a lucrative selected audience for marketers of Malaysia due to the ability of this group to fulfill their wishes financially and have a big drive to use.

According to Wadhera et al. (2017), with Alaeddin O. et al. (2018) assistance reported that mobile payment acceptance among Malaysians was the main topic to be discussed during the lecture of most economic decision-makers in the nation, while most of them discovered that "the mobile payment perspective of the country looked promising." as reported by Mandeep Singh, Head of Global Liquidity and Cash Management, HSBC Bank Malaysia Bhd. In addition, he added that "if you want your industry to grow, it has to be through digital payment (e-payment) or mobile trading" (Wadhera et al., 2017).

Nevertheless, Malaysians still have little participation in e-wallet caused by several difficulties for example, slighter information on the internet causing leads to little trust in the e-wallet program. Customers still use cash because there is skepticism about the value of e-wallet. Because of lack of awareness, user are refused to utilize the e-wallet according to Malaysia's Central Bank. Study from Alaeddin O et al. (2018) also demonstrated that safety and confidence are the fundamental cause and worry that customers do not want to utilize e-wallet.

Moreover, because of the constraints research from previous study such as Alaeddin O. et al. (2018), more research may be carried out include the sample size rising due to the research carried out among business school workers at Universiti Kuala Lumpur and adding to the suggested model some factors linked to the market impact of the traditional payment process. The causes are captivating to study, particularly within public university students, in Melaka, Malaysia. Many research expect that use of e-wallets will increase significantly in the coming years. In addition, if e-wallet is used to better understand customer needs and concerns, this study will benefit few financial and banking sectors or providers.

While coping with user- faced problems in the e- wallet framework, this research was going to lend a hand Malaysia software providers and developers. This research would examine the variables and elements that may influence consumers' acceptance of e-wallet as an alternative method of payment.

1.4 RESEARCH QUESTIONS

- i) What are the factors that influence public universities' student in Melaka to adopt e-wallet?
- ii) What are the most influencing factors to adopting e-wallet?
- iii) What is the e-wallet app that often been used by university student?

1.5 RESEARCH OBJECTIVES

The research is proposed to:

- i. To investigate the factors that influences the acceptance of e-wallet among public universities' students in Melaka.
- ii. To examine the most influence factors to adopt e-wallet.
- iii. To analyse e-wallet app that often been used by university student.

1.6 SIGNIFICANCE OF STUDY

This work leads to provide more insight into the awareness of using e-wallet as well as information to enhance the payment process, making it possible for Bank Negara Malaysia (BNM) to introduce a plan that will make Malaysia a cashless society by 2050. In this report, the researcher tried to find out about the user's attitude towards e-wallet payment through Malaysia being feasible. First, when using e-wallet as a payment method and how it has the effect, the project also explores the consumer's first concern. The study will provide recommendations for redesigning a program or ecosystem that can improve Malaysia's e-wallet service and its viability.

1.6.1 THEORETICAL CONTRIBUTION

The verifiability of this theory results lead to our interpretation of the user's attitude towards e-wallet payment viability. Next, this study help to improve our understanding of what is the users' main concern that affects intention of the user to use e-wallet. Confidence and technology acceptance model (TAM) combination theory suggests that stability, perceived utility and perceived user-friendliness affect the viability of e-wallet applications in Malaysia. Therefore, when the positions of users towards the service are favorable, there is greater feasibility to use e-wallet as a payment method.

1.6.2 PRACTICAL CONTRIBUTION

Functional input based on the analysis was simple. Using mobile payment would probably be higher if users found the system to be more secure, useful and user-friendly than conventional. The e-wallet apps make the payment process faster and safer. Users able to keep track of their financial transaction via e-wallet and the quick payment mechanism that can improve a nation's economy while building a cashless society that can curb corruption, according to our Prime Minister. Finally, the review of the study will provide some recommendations to increase the use of e-wallets among university students in Malaysia, while banks and other e-wallet service providers in Malaysia will be able to understand their shortcomings, which need to be updated and enhanced to enhance the use of the service. From this study, the main concern of users would be to find out how e-wallet viability in Malaysia can be affected. Therefore, this work provides significant contributions in the area of financial services to financial institutions.

1.7 RESEARCH SCOPE

The research discussed here was based on the factors that affect the acceptance of e-wallet among Melaka's public university student. The study population was the student on campus in Malacca from public universities who had their own accounts with the bank for personal use. First, respondents were over the age of 18, often using internet banking. When reviewing the associated topic, from March 2019 to November 2019, there is a short timeline.

When gathering information relevant to the paper, the author used two types of data. First was primary data gathering questionnaires based on the deliberated representative. Next was secondary data through reviewing journal articles, databases, studies and news article.

1.8 DEFINITIONS OF THE KEY TERMS

1.8.1 PERCEIVED USEFULNESS

Perceived usefulness was characterized as an individual think that utilize this method will enhance their activity efficiency and bring them benefits (F. Davis, Bagozzi, & Warshaw, 1989).

1.8.2 PERCEIVED EASE OF USE

F. Davis et al. (1989) claimed that the perceived ease of use was the efforts that are supposed to be provided when using the technology that includes physical and mental. Based on information technology (IT), perceived ease of use was distinguished for a principle developed to examine and assess user acceptance of a specific technology (Amin M. et.al, 2015).

1.8.3 SECURITY

Chellappa et.al (2002) & Shaw, N. (2015) in the study of literature advance the concept of payment security as ' the flow of information from the right source and reaching the intended party without being identified, altered or lost during transit and storage'.

1.8.4 TRUST

Trust represents a party's ability to be vulnerable to other party's actions (Mayer et al., 1995).

1.8.5 E-WALLET

Electronic wallet using mobile phone purchases is an evolution from its previous form of prepaid card that can be replenished for various purposes and used instead of using cash or coins for retail shopping or other payment (Azizah N. et.al, 2018)..

1.8 CHAPTER LAYOUT

This research has been group into five chapters. A brief introduction to the research topic will be outlined in Chapter 1, consisting of a research background on e-wallet and suggestion of factors that will accept e-wallet intent. This chapter will discuss the problem statement, research objectives, research questions, research scope, and significance of the study that elaborated more in practical and theoretical contribution.

Chapter 2 addresses the literature review that have connection with the study subject and context. This chapter will also include testing the theories that have been established and addressing independent variables and dependent variable in this study.

Chapter 3 contains the technique of data gathering, test representative, calculation scales and approaches to data analysis that emphasize the study methodology. This chapter addresses the framework for knowledge research and the approach to the execution of study.

Chapter 4 is the data gathered and produced by the survey. The Social Science Statistical Package (SPSS) program must analyze all valuable data obtained from the survey. The findings are presented in a table form for easier and better comprehension.

Finally, Chapter 5 was based on discussing and summarizing the research's result. In this section the researcher have discussed and finalized the limitation and suggestion for future research. However, this chapter also contains and addresses the drawbacks and brief condensed thesis.

CHAPTER 2

LITERATURE REVIEW

2.1 OVERVIEW

For chapter 2, the researcher has further addressed the empirical study of elements that affect the acceptance of e- wallet among public universities' student in Melaka. In addition, the aim of this literature review was to examine the relevant terms and variables used in this research study and to assess the relevance of the theory for the past researcher's research based on the reviews. Moreover, the relationship between literature and the field of study will also be defined and emphasized.

2.2 DEPENDENT VARIABLE

2.2.1 ADOPTION OF E-WALLET

Digital wallet is an application residing on an electronic device that passes user payment data to a point-of-sale device using Near-Field Communication ("NFC") technology, according to Ricardo Heredia Salazar (2017). It provides no transaction information on the amount of payment and does not adjust or alter the amount payable. Electronic wallet using mobile phone purchases is an evolution from its previous prepaid card form which can be replenished for various purposes and used for retail shopping or both payment rather than using cash or coins (Azizah N. et.al, 2018).

Elizabeth D. All right. Et al. (2017) found out that this program makes it possible to add debit or credit cards, to receive / send money from / to friends, and to pay for goods and services. E-wallet considered a high-tech platform to transcend money and payments was found comfortable and secure, suggesting high levels of acceptance. Hsu et al. (2015), suggested that an ordinary smartphone user spends approximately 82 percent of telephone use on applications such as entertainment, mobile shopping, and social interactions on average, and the rest of the time is divided between calling, emailing, and messaging. Consumers ' intention to use the e-wallet mode for online mobile device purchases largely depends on the services that banks and mobile service providers have available to customers via their own applications or the Internet through smartphones.

All e-wallet service providers propagated require to arrange in selecting the group. This will widen to other groups of age and not narrowed down for young people only (Varsha R. & Thulasiram M., 2016). Therefore, researching the psychological effect of this technology on humans is necessary from the above. E-Wallet is a prepaid record to begin with. There is certainly no corresponding denial request for service and goods. E-wallet is never denied service compared to an intended and unintentional default credit card blocking the account for further use (Kalyani P., 2016). Moreover, e-wallet promotes e-commerce because users does not need to fill up arrangement conformation at every level when customers buy something as the information has been processed and is undoubtedly amend and recorded via retailer sites in the order fields (Pachpande B. et.al, 2017). Getting e-wallets actually helps move away from a money-based economy. All the while, the economy pays for each of the exchanges, which has the effect of reducing the parallel economy's duration (Pachpande B. et.al, 2017).

In addition, Pachpande B. Et.al (2017) reported that the use of e-wallets substantially reduced the cost of transactions in the banking sector. Through e-wallets, small and small installments covering countless individuals (e.g. passage fee of Rs. 10/- to a landmark, application fee, e.g. the expenses of Rs. 10/- under the Right to Information Act, 2005, service fee installments, etc.) can be cost-effectively made. It would be restrictive for the banks to influence these exchanges through the typical / customary route, allowing more people to be used on their counters (Pachpande B. et.al, 2017). The risks associated with card robberies are also reduced by e-wallets (Pachpande B. et.al, 2017).

2.3 INDEPENDENT VARIABLE

2.3.1 PERCEIVED USEFULNESS

Perceived usefulness refers to "the degree to which a person believes he / she can increase his / her job performance by using a particular technology" (Davis 1989). Perceived usefulness was theorize as the principal predictor of behavioral intent to use (BI) value technology in the TAM system (Park, et al., 2014). Previous research from Stone & Baker Eveleth (2015) showed that perceived usefulness was positively related to e-text coherency, mobile service providers (Abbas & Hamdy, 2015) and online travel services (Li & Liu, 2014).

Based on research from Tandon et al. (2017), an individual depends on his cognitive evaluation of how his job / task performance will be improved by a merchandise of a high technology, which can be refer to e-wallet, to determine whether to use it or not. The element is an important indicator of trust in the acceptance of technology. This was supported by Aydin & Burnaz (2016), Nguyen & Pham (2016) and Tandon et al. (2017) stated that the utility associated with time-saving and speed has been found in previous studies. A study conducted by Shanmugam et al. (2014) found out that the behavioral intent and attitude towards using mobile banking in Malaysia were positively and significantly influenced by PU. Perceived utility for this research will positively affect the behavioral purpose and disposition of the university student to use e-wallet.

The research conducted by Tu Nhat Vy (2019) revealed that if a person think that e-wallet helpful, a person who did not use e-wallet would create a positive impact to it, causing him to go a step further by using the wallet and get advantages that indicate that the results match the discussion of perceived usefulness. Consumer told that e-wallet application's errands were made quickly, with agility, making life easier for the general population. However, the findings of this study showed that consumers are always in need of innovative technologies, which firstly improve their quality of life by providing speed and efficiency; and secondly, they are in line with the modern lifestyle that mobile devices are fast-paced and highly penetrated (Tu Nhat Vy, 2019). In this analysis, perceived usefulness was a believes where a consumer assumes that using e-wallet can improve his / her abilities, task efficiency, productivity, and make work simple and useful.

2.3.2 PERCEIVED EASE OF USE

Perceived ease of use is the degree to which individuals feel that it would be effortless to use a particular system (Davis, 1989). In technology adoption studies, especially in workplace environments, ease of use has been investigated (Davis, 1989). Chong et al. (2010) and Bedman Narteh (2015) advance the theory that if users feel that electronic banking is user-friendly and hassle-free, they will be more likely to use the program. Based on information technology (IT) writing, perceived ease of use has been described as a concept developed to look at and measure user adoption of a specific technology (Amin M. et.al, 2015). This is reinforced by Davis (1989) and Matemba et.al (2018) demonstrated that most consumers are likely to accept an online application with a higher perceived ease of use.

In addition, some previous studies have presented empirical evidence that perceived ease of use is one of the cognitive beliefs to assess the attitude of the consumer towards technology adoption. For example, Karahanna et al. (1999); Matemba et.al (2018) conducted an empirical study to find that the perceived ease of use might have a positive impact on the satisfaction level of the consumer. Moreover, other studies such as Legris, Ingham and Colletterte (2003); Zhu, Luo, Wang and Li (2011) and Goh Sau Wei (2017) concluded that a user-friendly device or program that is more user-friendly and easier to use is more likely to be beneficial.

Meanwhile, for robustness, Venkatesh and Bala (2008), who introduced the TAM3, added the determinants of TAM's perceived user-friendliness and use intention building. In TAM-related works, perceived ease of use through perceived usefulness is thought to have both direct and indirect impacts on the continued intention of IT (Matemba et.al, 2018) use. These previous models suggest that ease of use perceived encourages quality of use and tasks. In this study, perceived ease of use is described as the overall perception of the convenience of e-wallet purchase of goods and service.

A study conducted by Mehrad & Mohammadi (2016) reported that if consumers feel easy to learn and use mobile banking, they would increase their positive view of usefulness towards mobile banking. Various studies (Islam & Hossain, 2014; Mohammadi, 2015; Aydin, 2016 and Deventer & Klerk, 2017) have hypothesized and supported PEOU's effect on attitude. Therefore, it is said that perceived ease of use has an important relationship with the intention of adopting e-wallet.