

**FACTOR IMPACTING THE LEVEL OF ADOPTION IN NEW  
TECHNOLOGY: DIGITAL WALLET IN MELAKA**

**CHONG YEW FAI**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

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SIGNATURE : .....  
NAME OF SUPERVISOR : MS. ATIKAH SAADAH SELAMAT  
DATE : .....

SIGNATURE : .....  
NAME OF PANEL : DR. HAZMILAH HASSAN  
DATE : .....

FACTOR IMPACTING THE LEVEL OF ADOPTION IN NEW TECHNOLOGY:  
DIGITAL WALLET IN MELAKA

CHONG YEW FAI

Report submitted in fulfilment of the requirements for the Bachelor  
Degree of Technology Management (High Technology Marketing)

Faculty of Technology Management and Technopreneurship  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

JUNE 2019

## DECLARATION OF ORIGINAL WORK

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Signature :

Name : CHONG YEW FAI

Date :

## DEDICATION

I would like to dedicate the appreciation to beloved parents who supported me from spiritually and financially. A special thanks to my supervisor and panel who guided me throughout this research and thanks to my friends that helped and assisted me through the journey of research.

## ABSTRACT

Nowadays, more and more digital wallets were marketed but seems like the technology adoption rate is very slow, even in Melaka, one of the densest states for tourist. This research will discuss on the factor impacting the level of adoption for digital wallet in Melaka, where is the stages of Product Life Cycle digital wallet is in and suggest ways to boost the adoption rate of digital wallet. Unifies Theory of Acceptance and Use of Technology (UTAUT) model was utilize in this research. Quantitative research was using to conduct this research. Therefore, questionnaires will be distributed to public in Melaka randomly. Statistical Package for the Social Science (SPSS) was used to analyse data gathered.

Keywords: *digital wallet, product life cycle, technology adoption, UTAUT, Melaka*

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## LIST OF ABBREVIATION

<b>ABBREVIATION</b>	<b>MEANING</b>
ANOVA	Analysis of Variance
Bhd	Berhad
BI	Behavioral Intention
CIMB	Commerce International Merchant Bankers Berhad
DV	Dependent Variable
EE	Effort Expectancy
FC	Facilitating Conditions
FS	Social Factors
H0	Null Hypothesis
H1	Alternative Hypothesis
IV	Independent Variable
NFC	Near Field Communication
PE	Performance Expectancy
PLC	Product Life Cycle
RM	Ringgit Malaysia
SPSS	Statistical Package for the Social Sciences
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UTATUT	Unifies Theory of Acceptance and Use of Technology

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## CHAPTER 1

### INTRODUCTION

#### 1.0 Introduction

First chapter contain information for background of topic researched, factors affecting the consumer awareness level of digital wallet in Melaka. Researcher believe with this chapter was the start of discussion to bring success to the research. Furthermore, researcher will elaborate the problem statement, research objective, scope of study, limitation of study and importance of study.

#### 1.1 Background of Study

According to Masamila et al. (2010), a mobile phone is very import tool for people to do personal or professional activities. Mobile-money (m-money) is one of the emerging services for mobile phone user, m-money will be able to facilitates financial transaction for example, paying bills (Aker and Mbiti, 2010). Majority of the population from developing countries such as India who lives poorly also need to have a safe and secure financial transection (Pope et al., 2011). In a global scale, the number of bank account holder are significant lesser when compare to mobile phone users (Tobbin, 2012).



For India, the increasing volume of mobile device user drives digital wallet usage to a new high and payment done digitally are becoming popular. Indian Government have shown their initiatives to enhance the usage of digital wallet system to facilitate the transition into cashless economy (Sen, 2016). Even with inherent benefits from digital wallet technology, the actual user count of this technology has remained low (Agarwal, 2016). Mentioned by Shen (2015), the root cause of the low usage lies in the attitude and intention of user.

Digital wallet has been rolled out since early 2000s, but only recently mobile payment started to roll out the gathered traction, especially in US, European countries and few countries in Asian (Mallat and Tuunainen, 2008). According to Holmes et al. (2014), digital wallet has not really been rapid as expected, quick-service-oriented industry (service station, public transport, fast-food vendors) are those who adopted digital wallet. Digital wallet sales are diffident in showing industry it was growing fast, followed with the fast-improving infrastructures in emerging markets, help a lot in initiatives of the rise of non-cash societies. Furthermore, launch of new digital wallet for example Apple Pay or Samsung Pay, digital wallets syncing bank/credit cards with mobile device are predicted will become the mainstream. A study done in 2011 by KPMG discovered only 9% of managers considered digital wallets to be already popular, 83% of the other managers believed digital wallet would be wider spread to consumer by 2015 (KPMG, 2011).

Referring Groß (2015, p. 222), digital wallets are gaining popularity steadily, but research for digital wallet are still insufficient. There are more and more literature showing the benefit of digital wallet for customer, governments, merchants (Raina, 2014) and society (Arvidsson, 2014). On the other hand, literature for the other side (negative) which is the potential impact are very few, perceived risk by general public has been found that will bring an impact negatively toward customer adoption in digital wallet (Month, 2013; Wu and Wang, 2005; Shin et al., 2014).

## 1.2 Problem Statement

Mention by Dzof A. (2018), Malaysia already have the groundwork laid for digital wallet but public still reluctant to switch from physical cash to digital payment. According to Syahrudin Samsudin, Touch 'n Go Sdn Bhd's chief executive officer, implementation is slow, this is due to consumer believe cash is king even when Touch n' Go offer 20% discount for all trips and half-price tickets for people who use the train before 7 am. This shows that even company have put an effort to push digital wallet, users are still not utilizing it.

Mention by Yvonne T. (2018) in The Star Online, cashless payment only makes a small portion in the total payments system in Malaysia about 20%. This shows Malaysia still kin to cash rather than using cashless method like digital wallet. This was supported with a survey done by Financial Times Survey on the reasons for using cash among Asian, the top result shows that Asian cash is easiest to use, second is merchants still demand cash, third reason is feeling more secure carrying cash, forth is to keep transaction private, and finally is they do not trust security of digital payment. From these top five reasons, people do not use digital wallet is because short of knowledge and lack of trust, this result of slow adoption of digital wallet. According to Tengku Datuk Seri Zafrul Aziz, CIMB Group Holdings Bhd group chief executive officer, for mobile payments to be success, many factors need to be considered, these includes the interest and the eagerness from user to use mobile for their pay, have a larger quantity of merchant network for user to use the technology to pay and, network effect to ensure user have a good experience with the technology. This was a push and pull situation, in the case of Melaka, merchants have widely accepting cashless payment method but as mention earlier, consumer did not want the change.

## 1.3 Research Question

Three research questions have formatted from problem statement.

- I. What is the most significant factor impacting the level of adoption for digital wallet in Melaka?

- II. In which stages of product life cycle is for digital wallet in Melaka?
- III. How can company rise level of awareness on digital wallet in Melaka?

#### **1.4 Research objective**

Three research objectives have formatted from the research questions.

- I. To identify the most significant factor impacting the level of adoption for digital wallet in Melaka.
- II. To analyse the stages of product life cycle for digital wallet in Melaka.
- III. To suggest a strategy to rise level of awareness on digital wallet in Melaka.

#### **1.5 Scope of Study**

Goal of the study was to recognize the most significant factor that impact the level of awareness in digital wallet. In this study, researchers suggested three criterial of factors will impact level of awareness in digital wallet. Those factors are demographic factors, promotional activities done by digital wallet company and government policies establish by the government. Furthermore, this study will also analyse in which stages of product life cycle for digital wallet in Melaka and to suggest a strategy to rise level of awareness on digital wallet in Melaka.

#### **1.6 Limitation of Study**

Limitation recognize from this study was it did not cover all part of Malaysia and was limited to Melaka only. Therefore, the outcome of research was unable be generalized nor represent the whole Malaysia. Another limitation was time constraints,

we are given 24 weeks to conduct this study and it can be considered insufficient time to conduct a proper study.

### **1.7 Important of Research**

Important of the study was to recognize most significant factor influencing adoption level of digital wallet. Besides, researcher will also be able to understand how the factor can bring an impact to the adoption of digital wallet. This study will be aiding marketers when generating new ideas in marketing to achieve growth. Furthermore, this study can serve as a reference for future researcher who wish to further research the topic of digital wallet.

### **1.8 Summary**

Researcher had discussed background study of research topic, problem statements, research objective, scope of study, limitation of study and importance of study.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter contain information about the background of digital wallet, the background of product life cycle, and the background of Unifies Theory of Acceptance and Use of Technology (UTAUT) model, which was based on previous study done by other researchers. Further into this chapter, researcher will discuss about the research framework for this research and the hypothesis form.

#### 2.1 Digital Wallet

Digital wallet is a technology existing on mobile device, money transferred from user bank saving or credit account via debit or credit card or e-banking for payments toward other user or merchants who use the same platform of digital wallet. This provides cashless mode in making payment. For digital wallets, payments can be done through apps. Digital wallets app will provide services such as money transfers, bill payment, ticketing, shopping and recharging. In India, money transferred through digital wallets in retail businesses has the highest share at 38%, followed with mobile carrier reload and bill payments at 30% and 12% respectively (Singh, 2016).

Digital wallet industry is growing rapidly, mergers and entry of new player are common (Aparna et al., 2015). As Samsung newly launched digital wallet system, Samsung Pay supports an even advance technology which was Magnetic Secure Transmission, this technology allows user transfer money simply tapping back of their phone to a payment terminal's card reader in the retailer store (The Economic Times, 2017). The development clearly indicate digital wallets industry will be having a fierce competition.

### **2.1.1 Digital Payment**

Digital payment simply be explained as form of payment transaction done via mobile devices (mobile phone or tablet), using initiation, authorisation and confirmation for exchange for same value goods or services (Au and Koffman, 2008; Blochlinger, 2012).

In addition, digital payments can be defined as:

- Transaction procedure which the final step, payer uses communication technologies via mobile devices for realization of payment, initiation or authorization (Au and Koffman, 2008, p. 141).
- Exchanging funds for goods/services where mobile device as medium for payment confirmation (Raina, 2014, p. 186).

In this market, there are various types of mobile payment service provider, but technologies behind the deliver process can be categorise into; proximity payments or remote m-payments (Agarwal et al., 2007). Proximity payments, users need to have a credit/debit card or a mobile device present at payment terminal, holding device/card only a inch away from payment terminal to have a complete transaction. This payment method usually is aided via near field communication (NFC) technology or also known as “contactless payment”. On the other hand, Remote payments need user sign-up to a service, normally involve downloading an application to mobile device, and using it to make payment. Users may need have money parked in their user account or funding the user account

directly from their bank account. Example for this type of service option are Google or PayPal.

Instead of using credit or debit card, digital wallet is application on mobile device allowing users to excess mobile device for paying. There are many different types of providers, some used remote or cloud-based approach of them, others using proximity technology (NFC) (Guha, 2013).

E-commerce has a subset named mobile commerce (Coursaris and Hassanein, 2002), it was performed through mobile device, provides electronic commerce to consumer. It makes up about 12% of the total electronic commerce sales in USA and growing (Guha, 2013).

### **2.1.2 Innovation and Opportunity**

Mobile payment has its potential in making check-out simpler and faster, integrating with online channel to store to helps to improve inventory controlling, customer service and marketing. According to Yang (2010), there were many ways mobile-shopping can optimize the buyer experience in the physical outlet, includes provide a real-time and customized interaction between customers and retailers; providing specific mobile marketing; aiding customers when making purchase; also guiding retail processes.

Retail industry is excited on the marketing opportunities that mobile payment can offer. As part of multi-channel retailing, mobile payment technologies can have a huge coverage of contact points to reach their potential customers at any given time. Fiore and Kim (2007, p. 421) mentioned the experiences during shopping involve more than just pure customers acquisition of goods, mobile devices offer more functionality that are not available on a plastic card, for example using Global Positioning System technology to acknowledge customers of the deals. Mobile payment brings many ways for retailer to build

services around transaction, service like automated offers, targeted marketing, reviews & feedback, social media's "check-ins" and social discovery.

Some of the benefits using mobile payment including increase conversion between customers and retailers, enhanced loyalty programs, margin improvements, and real-time analytics such as review & feedback. Mobile payment streamlining shopping experience by showing specification on products, product reviews and its availability. If customers can complete their purchase immediately without the hassle looking for a payment station or have a long queue, the customer experience can significantly be enhanced.

## **2.2 Product Life Cycle (PLC)**

The concept of product life cycle (PLC) has achieved acceptance all over the globe because of the wide application and appeal. In the 1950s, markets focusing consumer goods and can be characterized by very simple segment, reasonably stable technology and unsophisticated infrastructures makes product life cycle an acceptable assemblage in current market dynamics (Wood, 1990). Even though all life cycles are different, this PLC model were use offend with backing from experience or experimental research as forecasting tools for marketing and helps in planning for product tactics in advance in every single stage of the product life cycle. This concept was analyzed regularly for marketing that product life cycle became "given" to various managers.

PLC denotes an essential component in marketing philosophy and has been this way for forty years. Stated in marketing theory, each product has their own PLC and how marketing process were managed was important in order to survival in the market. The PLC describes how a product in 4 different stages: introduction phase, growth phase, maturity phase and decline phase showing in figure 2.2. Every phase demands a different strategy to promote, and setting of prices, to maximize product value and its profit. Main components of PLC are stage identification, sequential sales behavior and changes of sales. According to Dhalla and Yuspeh (1976), the PLC has