# OBSTACLES TO INTENT IN MOBILE COMMERCE ADOPTION; PERCEPTION OF GEN-X IN MALAYSIA.

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# Obstacles To Intent In Mobile Commerce Adoption; Perception Of Gen-X In Malaysia.

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## LIST OF ABBREVIATIONS

| | |
|---|---|
| IRT | Innovation Resistance Theory |
| MC | Mobile Commerce |
| Gen-X | Generation X |
| TAM | Technology Acceptance Model |
| IV | Independent Variable |
| DV | Dependent Variable |
| SPSS | Statistical Package for the Social Sciences |
| DOSM | Department Of Statistics Malaysia |
| MCO | Movement Control Order |

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**ABSTRACT**

Because of the rapid uptake and market penetration of mobile devices, mobile commerce is currently a growing trend. Numerous telecommunications firms have been drawn to invest considerably in the growth of mobile commerce after seeing its potential. However, Malaysia continues to have a poor acceptance rate for mobile commerce. In Malaysia, Generation X is characterized by high income power, shuns technological advancement and is one of the popular target segments due to their pre-dominant population in this country. Therefore, the goal of this study is to investigate the barriers to adoption in order to comprehend why Generation X in Malaysia is adopting technology so slowly. Usage, value and trust barriers have all been examined using Innovation Resistance Theory (IRT). The findings of this study are based on information gathered from questionnaire surveys from 384 Generation X consumers in Malaysia. Purposive sampling is used to choose target respondents. The hypotheses of this study are tested using Pearson correlation analysis. The results of this study were expected to give local companies the ability to identify individual resistance behavior, support them in creating solutions to remove the barriers to resistance and serve as a way to possibly increase the adoption rate of mobile commerce.

## CHAPTER 1

## INTRODUCTION

### 1.1 Background of The Study

Mobile commerce commonly referred to as m-commerce, is that the use of wireless mobile devices such as smartphones and tablets to undertake online commercial transactions such as product purchase and sale, online banking and billing. M-commerce allows for the acquisition of a wide range of items and services, including banking, investments and therefore the purchase of publications, travel expenses and music streaming (Gao & Shao, 2019). Several reasons have contributed to the fast rise of mobile commerce, including greater wireless portable device computer capacity, the proliferation of m-commerce applications and therefore the general resolution of security challenges. M-commerce also allows time savings, convenience, a wide selection of products, affordable prices and a change in the conventional manner that consumers purchase in physical stores. In addition, according to Lissitsa and Kol (2019), the order for the good or service is placed through a computer network and a mobile device using wireless technology in m-commerce, but in e-commerce it is irrelevant whether the device used to place the order is mobile or not.

The discharged of to start with smartphones in 1999 and widely utilized of the keen phones has encourage boosted the m-commerce. Between 2013 and 2017, generally portable phone entrance rate will increment from 61.1% to 69.4%. The utilize of smartphone alone outperformed 1 billion in 2012 and expanded to 1.75 billion in 2014. 50.3% of e-commerce activity is from versatile phones compared with because it was 49.7% from computers. M-commerce deals in 2014 add up to $204 billion and it's anticipated to reach as much as $626 billion in 2018. An inquire about administered related to versatile commerce in Australia

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appears that there are 10 major things as often as possible acquired. Clothing, shoes, accessories, books and endowments are the foremost prevalent acquired utilizing portable phones. Besides that, budgetary items and monetary administrations are moreover progressively prevalent.

The amount of internet users in Malaysia has been overtaken by the number of mobile subscribers. Mobile commerce has attracted significant traffic and lots of telecom companies have recognized its potential and invested heavily in its development. Consequently, business environments were motivated by this innovation to determine efficient and effective ways of doing business. However, Digital Malaysia reported that the entire amount spent on mobile commerce (RM467 million) accounts for only a quarter of ecommerce (RM1.78 billion). the share of people using mobile phones and computers are 94.2% and 56%, respectively. This shows that mobile features a higher penetration rate but less money was spent on mobile commerce compared to e-commerce. Therefore, the above comparison indicates that causal factors behind the resistance to the intention to introduce mobile commerce in Malaysia need further investigation (Krishna Moorthy, 2017).

The research aims to review of Generation X reluctant on technological advancement (mobile commerce) in Malaysia. According to Krishna Moorthy (2017), Generation X also generally regarded as Gen-X, refers to the generation of people born between the mid-1960s until the early 1980s. The exact years that make up Generation X vary. For Generation X, the use of mobile commerce does not work for them because they have less intelligent and forward thinking. Thus, the relationship between Generation X and mobile commerce is less satisfactory than other generations (Yeon, Park & Lee, 2019). Therefore, this study we want to know more why they cannot use this mobile commerce world in themselves. Maybe some of them need someone to teach or maybe some of them don't know anything about this fast-growing technology.

As a results of their large population and spending power, Generation X is a desirable target demographic. So, it's important to understand Gen-X's intentions for mobile commerce adoption. Also, previous researchers emphasize on the obstacles to intent in mobile commerce adoption towards Generation X which including of the influencing variables of trust, perceived ease of use, perceived usefulness, attitudes, personal innovativeness, subjective norms and perceived behavioral control (Ghazali, 2018). Nonetheless, limited researches have conducted in the emphasizing the obstacles to intent in mobile commerce adoption towards Gen-X in the aspect of usage, value and trust barriers. Thus, examining the Gen-X peoples is essential and this research gap has given a call to current research. This research paper attempts to explore the barriers of usage, value and trust among the Generation X people to intent mobile commerce adoption in Malaysia.

## 1.2 Problem Statement

Conversely, mobile commerce refers specifically to transactions made through smartphones or mobile devices. According to Lissitsa and Kol (2019), mobile commerce allows users to transact from anywhere as long as there's a wireless internet provider in their area. Mobile commerce transactions are usually completed during a few clicks, whereas e-commerce via tablet, laptop or personal computer may require more time and research on the company website. The range of devices capable of mobile commerce is growing. The portability of mobile devices helps businesses expand their customer reach through mobile commerce. Coupons and discounts are often sent to customers by retailers. Personalized shopping experiences also can connect retailers and customers. The mobile commerce app can help customers find products in your store by tracking your location using GPS. It also can

perform multi-factor authentication, including biometrics like fingerprints and retina scans, for added security with mobile commerce applications.

In research from Krishna Moorthy (2017), people born between 1960 until 1980 are mentioned as Generation X. They are non-materialistic, have plenty of money and are hesitant about brand names and technical improvements. They account for 23.9% of Malaysia's overall population. As a results of their large population and spending power, Generation X is a desirable target demographic. So, it's important to understand Gen-X's intentions for mobile commerce adoption. The goal of this study is to analyze the resistance factors in order to understand the reasons behind Malaysia's Generation X's poor adoption rate of mobile commerce. The major purpose of this study is to examine the link between usage barriers, value barriers, trust barriers and Malaysian Generation X mobile commerce adoption intention. Understanding the challenges to adoption is crucial for raising the rate of adoption as mobile commerce grows more popular in Malaysia. Generation X is thought to have strong purchasing power and to be a big market group in the mobile commerce sector.

Thus, this research aims to review of Generation X reluctant on technological advancement (mobile commerce) in Malaysia. Nowadays, due to the enormous development in mobile device usage and market penetration, mobile commerce (MC) has grown in popularity. Mobile commerce is that the use of mobile devices to conduct transactions. Mobile commerce encompasses a good range of services such as mobile ticketing, mobile banking, mobile marketing, mobile information services, mobile shopping and mobile entertainment. In Malaysia, 86.3% of the population owns a mobile (Malaysian Communications and Multimedia Commission, 2013; Krishna Moorthy, 2017).

Therefore, according to Sarkar, Chauhan and Khare (2020), extent to which various factors influence trust in m-commerce is determined by the antecedents of trust. For example,

proposed an indirect relationship between trust and customers' behavioral intention to use mobile banking. Some researchers discovered evidence that trust has a direct effect on mobile banking adoption and discovered that perceived usefulness has no effect on trust in the context of mobile wallets. These issues have delivered to the attention of researchers to understand what the factors are influencing the resistance factors to understand the reasons for the low mobile commerce usage rate among Generation X in Malaysia.

## 1.3 Research Questions

The following questions were developed in order to meet the research objectives of the study below:

a) What is the relationship between usage and adoption intention of mobile commerce among Generation X in Malaysia?

b) What is the relationship between value and adoption intention of mobile commerce among Generation X in Malaysia?

c) What is the relationship between trust and adoption intention of mobile commerce among Generation X in Malaysia?

## 1.4 Research Objectives

The general objectives of the study attempted to:

a) To identify the relationship between usage and adoption intention of mobile commerce among Generation X in Malaysia.

b) To examine the relationship between value and adoption intention of mobile commerce among Generation X in Malaysia.

c) To identify the relationship between trust and adoption intention of mobile commerce among Generation X in Malaysia.

## 1.5 Scope of The Study

This study is focusing on why Generation X have a problem to use a mobile commerce in their lifestyle. This study will be done with a soft copy questionnaire as a survey and references. This study shall have male and female of Generation X people with the age of 42 and above. This study will not cover the other problems that are not necessarily connected on barrier and adoption intention to introduce mobile commerce to Generation X in Malaysia such as factors that outside of the scope of this study. The respondents should be enrolled by the people who born between 1960 until 1980 in Malaysia.

On the other hand, the reason why this researcher chooses Generation X as respondents is because they do not know how to use it, what is the benefits of using it and they are not fully trusted with mobile commerce. Numerous studies have been conducted on the use of mobile commerce in the past, but it is critical to understand why customers reject innovation rather than embrace it, since this is one of the primary reasons why new goods fail to find a market. As a result, in order to enhance the acceptance rate of mobile commerce, local businesses that plan to or already use it must be aware of the barriers to such use. According to the study's findings, local firms will be better able to understand the link between these barriers and customers' intents to adopt mobile commerce in Malaysia. As a consequence, our research will

aid in understanding how individuals react when confronted with opposition and will assist small business.

## 1.6 Significance of Study

This study aims to investigate the barriers to understanding the causes of the poor adoption rate of mobile commerce among Malaysia's Generation X. The primary goal of this study is to examine the connections between value barrier, use barrier and trust barrier as well as Generation X's intention to adopt mobile commerce in Malaysia. The hurdles have been studied using Innovation Resistance Theory (IRT).

The usage of mobile commerce has been the subject of numerous studies in the past but it is important to understand why consumers reject the innovation rather than embracing it, as this is one of the main reasons why new products fail to find a market. Therefore, in order to increase the adoption rate of mobile commerce, local firms that plan to use it or already do so need to be aware of the impediments to such use. Local firms will be better equipped to comprehend the relationship between all barriers and consumers' intentions to adopt mobile commerce in Malaysia according to the study's findings. As a result, this study helps local businesses come up with solutions to get rid of resistance and possibly increase adoption rates while also advancing our understanding of individual resistance behavior.

Resistance considerations in mobile commerce adoption are crucial information to boost its acceptance rate as it becomes indispensable in Malaysia. In the mobile commerce market, Generation X is a significant market segment and is thought to have a lot of purchasing power. By incorporating all five components of Innovation Resistance Theory (IRT) and an additional factor, which have frequently been reported as a significant barriers to innovation

adoption, this study aims to further investigate the main obstacles to the adoption of mobile commerce. Though there are numerous studies that cover mobile commerce literature, the Innovation Resistance Theory (IRT) model has only been included in a small number of them. Therefore, the results of this study could serve as a reference for future scholars who are interested in researching the same subject.

## 1.7 Definition of Terms

### 1.7.1 Mobile Commerce

Mobile commerce can be described as a mobile store that exists in the pockets of the clients. According to Sujatha and Sekkizhar (2019), mobile commerce is not a distinct organization. It is actually a division of e-commerce. Unlike mobile commerce, which involves using mobile phones, tablets and other portable wireless handheld devices with an internet connection, e-commerce involves purchasing and selling goods and services over the internet using computers, desktops and laptops. The major goal of mobile commerce is to make sure that clients can purchase conveniently on the smaller screens found on mobile devices. Providing clients with a mobile friendly experience and a responsive store design to ensure a user-friendly experience for online shoppers is one of the key aspects influencing the success of online sales today. By developing mobile applications that meet the needs of the retail business, e-commerce retailers are gradually integrating mobile commerce with their services. Simply said, mobile commerce can be a tool for increasing the overall revenue of an online retail operation.

### 1.7.2 Adoption Intention

According to Ajzen (1989), the level of a person's willingness to engage in a behavior is referred to as behavioral intention in the theory of reasoned action. Also, the subjective likelihood that a person would use mobile services is known as behavioral intention. Meanwhile, according to Krishna Moorthy (2017), adoption intention is the result of a number of factors coming together to produce an intention that shows the customer is prepared to perform specific activities or an individual's intention is a subjective likelihood of performing certain tasks.

### 1.7.3 Generation X

Generally speaking, the term "Generation X" refers to the group of people who were born between 1960 until 1980, while some publications used slightly different dates (Krishna Moorthy, 2017). Because it comes after the well-known baby boomer generation and before the millennial generation, it has occasionally been referred to as the "middle child" generation. One of the reasons that Generation X is regarded as being neglected or overlooked when the generations are discussed is that it has fewer individuals than either of those groups. According to reports, more than 75% of Gen Xers use social networks, with Facebook leading usage and YouTube following closely behind. Although Gen Xers' commitment to brands is unmatched, their trust can be difficult to gain (Jung, 2017).

### 1.7.4 Usage Barriers

Usage barrier is the opposition to an invention caused by its inconsistency with the routine and plan currently in place. To get something in an invention it requires skill and efficiency to provide positive implications for m-commerce. Usage barrier is the resistance to an invention caused by the inconsistency with current routine and plan (Barati & Mohammadi, 2017). Based on the research done, the use of mobile commerce will be affected if the skills in

the disability in reading and writing are decreasing which will restrict the use. From my point of view, approach, convenience and a lack of alternatives are what I see as usage barriers of mobile commerce. The following elements all have the potential to annoy clients and prevent them from using it.

### 1.7.5 Value Barriers

The value of the specific product is one of the key factors on which the intention to use mobile commerce depends. Particularly in developing nations, a product's worth determines whether or not a buyer will purchase and utilize it. Users of mobile commerce applications frequently receive discounts on various goods and services, which encourages customers to buy stuff using their smartphones (Natarajan, 2017). From my point of view, the value of mobile commerce is not only on the value of a product but other advantages such as time management, financial management and others.

### 1.7.6 Trust Barriers

Trust barrier influence people's decisions to adopt mobile commerce. Due to the fact that mobile commerce employs wireless networks for communication and some transactional activities, it differs significantly from conventional forms of business. Due to people's concerns about the security of data transmission and storage, especially for transactional activities that call for the disclosure of personal information, this creates a barrier to trust for people (Mazen Ali, 2017). From my point of view, I believe that many people are hesitant to provide e-commerce websites with their sensitive personal information. This is due to the overabundance of news about fraud, data breaches and identity theft.

## 1.8 Organization of The Study

The following is the research strategy from the start of the study to the end, to help the writing of this study be done in a more organized manner. The introduction of mobile commerce adoption intention and the perception of Gen-X in Malaysia are both explained in first chapter. Additionally, this chapter discusses the significance and goals of the study in addition to detailing the background, issue statement, research questions, study scope, as well as term definition.

In order to evaluate the gaps in the literature that have not been addressed, the second chapter will detail previous studies that have been adopted from books, papers, journals and other sources. In addition, this chapter will go into great detail about research on the impediments to mobile commerce adoption intention among Malaysia's Generation X and how they perceive those barriers.

The third chapter will provide a detailed explanation of the research methodology as well as the procedures employed to gather and analyze the questionnaire's survey results. Research design, sampling technique, sources, sample size and analytic plan are some of the methods employed in this chapter.

Next, the findings derived from the data gathered and the respondents' demographic profile are often presented in the fourth chapter. This chapter will explain the respondents' demographics and the findings from the data collected after applying various analyses, such as descriptive statistics, reliability and normality tests, as well as Pearson correlation analysis.

Finally, in chapter five, we would address the main conclusions, implications, limitation and suggestions of this study in light of the findings. This chapter would summarize the demographic profile of the target respondents as well as the data analysis results.

## CHAPTER 2

## LITERATURE REVIEW

### 2.1 Introduction

This study of the literature review included an overview of previous research on mobile commerce and one underpinning theory to support the research. The review summarized one greatest underpinning theory which is Innovation Resistance Theory (IRT) that has been developed by Ram and Sheth (1989). From (IRT) theory, it can be proved that there are some reasons to intent in mobile commerce adoption and the explanation why Generation X resist the mobile commerce innovation. This study aims to further explore the mobile commerce adoption among Generation X by utilizing three components of Innovation Resistance Theory.

### 2.2 Underpinning Theory

#### 2.2.1 Innovation Resistance Theory (IRT)

The ideas used in this study were presented and addressed in this section. This study presents an integrated model to explore what are the obstacles to intent in mobile commerce adoption perception of Generation X. The Innovation Resistance Theory (IRT), served as the framework for this research created by Ram & Sheth (1989). A very broad definition of an Innovation is a thought, activity, or thing that people perceive as distinct. From the perspective of a marketer, the term "Innovation" has to be more specifically defined as a product that the consumer perceives as innovative. "Resistance" to change may be defined as any activity that serves to maintain the status quo in the face of demand to modify the status quo. Resistance to change is related to how frightened people feel by change.

Innovation Resistance Theory (IRT) can be accurately defined as a situation where someone willingly rejects an innovation, either before or after considering the benefits obtained (Naan Ju & Kyu-Hye Lee, 2020). From IRT theory, it can be proved that there are some reasons to intent in mobile commerce adoption and the explanation why Generation X resist the mobile commerce innovation. Innovation resistance is meant as behavior that results from rational thinking, making decisions about the adoption and use of innovation because of the possibility of change brought by changes to the existing status quo and deviations from the existing belief system (Hew, 2017). The rigor of IRT makes this theory suitable for analyzing users' resistance to progress in Generation X's perception of mobile commerce and the results of the theory can prove why Generation X is against mobile commerce innovation.

## 2.3 Previous Studies

### 2.3.1 Mobile Commerce Adoption Intention

Research on mobile commerce is still in its infancy compared to the development of mobile phones. There are only a few previous studies that focus on mobile commerce frameworks. Several factors that can play a major role in the success of m-commerce in three categories which are first, security and trust. Second, personalization and localization. Third, user convenience. Thus, security and trust are the most important factor in m-commerce success (Aristotelis & Nasiopoulos, 2017). Only half of the studies are related to behavior and diffusion of m-commerce users. Three concepts that will be applied from the Innovation Resistance Theory (IRT) which is applied in this study includes usage, value and trust.

Based on the research done by Verkijika (2018), it stated that perceived risk and cost will give a negative impact to adoption intention of mobile commerce. The degree to which consumers believe that conducting transactions online will result in harm or an undesirable

event is referred to as perceived risk. It also relates to an individual's thoughts of any potential risks associated with utilizing a particular technology. The perceived risk of using m-commerce has a negative impact on the intention to use mobile commerce.

In short, the findings of these previous studies are consistent with the hypotheses of this study whereby usage, value and trust barriers have significant relationship with the adoption intention of mobile commerce and become the most important factors. However, this research will not focus on perceived risk and cost but more focus on usage, value and trust barriers.

### 2.3.2 Usage Barriers

Usage barrier is the opposition to an invention caused by its inconsistency with the routine and plan currently in place. To get something in an invention it requires skill and efficiency to provide positive implications for m-commerce. Usage barrier is the resistance to an invention caused by the inconsistency with current routine and plan (Barati & Mohammadi, 2017). Based on the research done, the use of mobile commerce will be affected if the skills in the disability in reading and writing are decreasing which will restrict the use.

According to Mahatanankoon and Vila-Ruiz. (2017), discovered that the adoption of m-commerce is impacted by device inefficiency. The use will be impacted by mobile device incompetence. In the US, data from a web-based survey of 215 university students was gathered. A factor analysis revealed a bad correlation between mobile commerce usage patterns and device efficiency. Adoption of m-commerce is negatively impacted by usage barriers related to mobile device deficiencies and incompetence. The studies thus validate our initial hypothesis that usage barriers have a detrimental impact on mobile commerce adoption.

According to Technology Acceptance Model (TAM), a person using technology is directly or indirectly influenced by behavioural intentions, attitudes, system usefulness and

perceived ease of use of the system (Asastani, 2018). Lack of proficiency is linked to usage constraints since adoption would be hampered by illiteracy. Adoption of mobile commerce is significantly impacted by mobile device incompetence, which is linked to usage barriers. Adoption is negatively impacted by cognitive accessibility, which is about knowledge of mobile usage. The studies mentioned above thus confirm our initial hypothesis that usage barriers have a negative impact on mobile commerce adoption.

### 2.3.3 Value Barriers

The value of the specific product is one of the key factors on which the intention to use mobile commerce depends. Particularly in developing nations, a product's worth determines whether or not a buyer will purchase and utilize it. Users of mobile commerce applications frequently receive discounts on various goods and services, which encourages customers to buy stuff using their smartphones (Natarajan, 2017). By Natarajan (2017), the association between value and intention to utilize a mobile commerce application has been shown to be insignificant. Value is one of the factors that has received less research in terms of technological acceptability, despite past studies showing that value has a direct impact on customer purchasing decisions.

On other side, the level of mobile commerce communication increases user compatibility. The positive experience of using mobile commerce communication motivates them to keep using it as their lifestyle and usage. They emphasized how their values and social system now include using mobile devices for mobile commerce communication (Mazen Ali, 2017).

Consumers' perceptions of value include the impact of value, perceived value, and perceived usefulness. Results indicate that value has a favorable impact on the intention to

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adopt. These data thus validate our second hypothesis, according to which the value barrier has a detrimental impact on the uptake of mobile commerce.

### 2.3.4 Trust Barriers

Trust barriers are a factor in changing individual decisions to adopt mobile commerce. Mobile commerce is very different compared to other commerce because mobile commerce uses wireless networks to communicate and do some transaction. With this, it causes a trust barrier to an individual because it will give individuals concern about the security of data transmission and storage, especially for transactional activities that require the provision of personal information (Mazen Ali, 2017).

A user's desire to participate in mobile commerce is substantially influenced by trust. The adoption of mobile commerce is significantly influenced by consumer trust when they utilize it for communication, claims Mazen Ali (2017). The majority of users who use mobile commerce for communication purposes have faith in the vendor or technology. Because of their excellent communication experience, consumers' trust in mobile commerce increased, which motivated them to use their mobile devices for more difficult tasks like making purchases. Consumer confidence in mobile commerce will increase with security. Once they are confident in the security provided by mobile commerce communication, they will use it with the link between them and the secured merchants in an easy and beneficial manner. Customers' positive experiences and feelings of security persuaded them to use their mobile devices for transactional tasks.

Trust will influence the intention to shop online and will ultimately lead to online purchasing behavior. Usually, users will make purchase choices through online applications based on other people's reactions. Most consumers trust online businesses based on positive reviews from their environment such as their peers or family. Positive online ratings and

reviews can also help in building customer trust (Chen & Samaranayake, 2022). Somebody can overstate the significance of trust in interpersonal relationships. Trust is viewed as a collection of specific beliefs that are mainly concerned with the well-being, skill and integrity of the other party.

**2.4 Hypotheses Statement**

A hypothesis is a claim that has not been independently verified about a subject of interest to the researcher, such as a fact or proportion. Its nature is declarative and it can be empirically tested. Using the stated management and researcher issues as a foundation, the researcher develops the following hypotheses. There will be a well-tested hypothesis in response to a properly defined problem.

For this study, hypotheses have been developed based on the literature review as below:

H1:  There is a significant relationship between usage and adoption intention of mobile commerce among Generation X in Malaysia.

H2: There is a significant relationship between value and adoption intention of mobile commerce among Generation X in Malaysia.

H3: There is a significant relationship between trust and adoption intention of mobile commerce among Generation X in Malaysia.

## 2.5 Conceptual Framework

**Independent Variables (IV)**                                      **Dependent Variable (DV)**
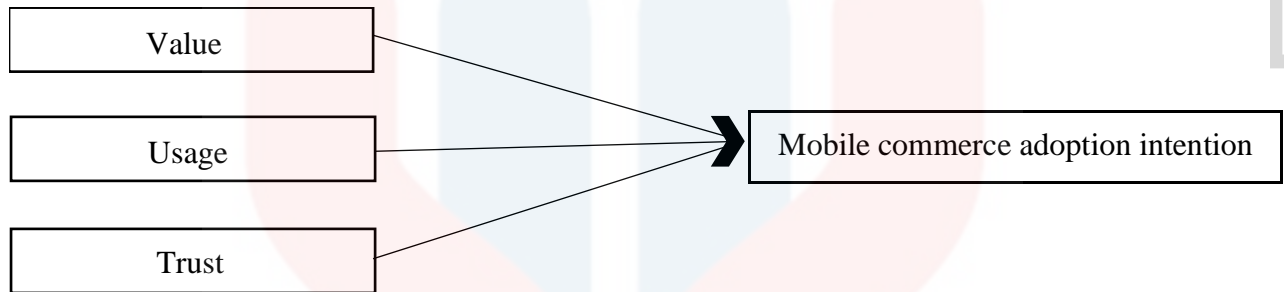


Figure 2.1: Conceptual Framework of Barriers to Mobile Commerce Adoption Intention

Among Generation X in Malaysia.

Figure 2.1 shows the conceptual framework for the study on this topic. This framework is built based on the research questions and the variables used. All the variables become the effect of the cause-and-effect relationship in a study. This framework describes the relationship between the independent and dependent variables, which serves as an indication of whether the relationship is positive or negative. According to Wang, Ou and Chen (2018), for mobile commerce research this requires a new perspective and a hypothetical framework of consumer acceptance is the basis of a successful business.

## 2.6 Summary

This chapter explains in detail about all the variables found through the hypothesis and conceptual framework. There are three hypotheses that have been constructed using the management and researcher issues stated as a basis. This section discusses previous studies related to the topic under study. From this chapter, all relevant literature has been discussed and reviewed by the researcher. All information used in the study of Chapter 2 is based on secondary sources obtained from relevant journals and articles of the recent years.

## CHAPTER 3

## RESEARCH METHODOLOGY

### 3.1 Introduction

Research methods are approaches, techniques, or procedures used to gather data or evidence for analysis to reveal new knowledge or develop a deeper understanding of a topic. This chapter will describe more about the method that has been used in this study. Every step and method of the research process will be covered in this chapter or section from research design, data collection methods, population, sample size and also sampling techniques used for the research study. Lastly, in this chapter provides a thorough explanation of variables measurement and procedure for data analysis.

### 3.2 Research Design

This research focuses on the variables that has been the causes of obstacles to intent in mobile commerce adoption (perception of Gen–X). The fundamental focus of design is the aims, uses, purposes, intentions, and plans within the realistic constraints of space, time, resources, and the researcher's availability. A researcher's ideas are reflected in their research design. By tying the study together with a structure plan that demonstrates how all the key components cooperate to try to address the research objectives, it helps avoid dissatisfaction. This study is more objectives when it comes with understanding and explores about the correlation between the independent variables (usage barriers, value barriers and trust barriers) and the dependent variable (mobile commerce adoption intention). Quantitative research methods were chosen for this research paper as it has been the case in nearly all of the existing literature reviewed and also to find all the necessary information stated. Quantitative

procedures convert phenomenological data into numerical values so that statistical analysis methods with a conceptual basis can be used to clarify, test and validate theories and hypotheses. These techniques need a lot of effort and preparation. They frequently respond in a closed-ended manner. Quantitative researchers believe that there is an objective reality that exists independently of all observations and that the world exists outside of itself.

Moreover, in this study research study, sampling method that we used is purposive sampling. Purposive sampling is a type of non-probability sampling where elements are chosen since they fit the sample's requirement. Purposive sampling is most commonly used when measuring a difficult-to-reach population (Campbell, 2020). Purposive sampling seems to have a lengthy history of improvement and opinions on its simplicity and complexity are equally divided. Then, purposive sampling was used in this study because it better matches the sample to the goals and objectives of the research, increasing the study's rigor and the reliability of the data and findings. According to Sharma (2017), while the objectives of the various purposive sampling approaches vary, these can give researchers the rationale to extrapolate conclusions from the sample under study, whether they are theoretical, analytical, or logical in character. The method of data collecting is chosen based on the purpose of the study and its applicability to that specific study's design. The process of data collection is very essential in the field of research. It serves as a fundamental research tool. If the information gathered is objective, it will be highly beneficial.

**3.3 Data Collection Methods**

The data collection method is the process of collecting information for the targeted variables in an organized method. Data collection is function to collect all the data to have the best result in doing research. In this research study, the method to collect the data is from

primary data collection by using questionnaire. However, according to the instruments that has been used to collect the data is online questionnaire which is can be categorized as quantitative method. The questionnaire will be distributed to share surveys directly in person or on social media such as Instagram, Facebook and WhatsApp randomly to the Generation X's respondents.

Aside from that, in term of data analysis, SPSS software will be used to analyze the acquired data. Based on descriptive statistics, reliability and normality tests as well as Pearson correlation analysis, the data from this study will be analyzed. To provide insight into the backgrounds of the respondents, descriptive statistics including frequency distributions, percentages and means will be use. Additionally, the association between barriers (usage, value and trust) and intention to adopt mobile commerce is determine using the Pearson correlation analysis.

### 3.4 Study Population

In this study, the population will be a Generation X in Malaysia. According to Moorthy et al. (2017), in research study topic barriers of mobile commerce adoption intention is focus to get perception from Gen-X in Malaysia. In Malaysia, Gen-X is included a group of people that range around 42-62 years old. Based on Department of Statistics Malaysia (DOSM), the population size regarding to 42-62 years old is 30% from the whole population in Malaysia which is the population size is 9,941 people.

### 3.5 Sample Size

The number of respondents or observations included in a study is referred to as the sample size. The number "n" is frequently used to signify the sample size. Two statistical characteristics that are affected by sample size are the accuracy of our estimations and the study's capacity for drawing conclusions. The study's purpose and population size, along with the degree of precision, level of confidence or risk and degree of variability in the variables being assessed, have all been taken into consideration when determining the appropriate sample size. As an example, the Krejcie & Morgan (1970) states that 384 responses are needed as a minimum sample size for the population of 5761.2 million people from Generation X who born from 1960 – 1980 in Malaysia based on Department of Statistics Malaysia Official Portal (DOSM).

Table 3.1: Example Sample Size of Population Used by Krejcie & Morgan (1970)

| N | S | N | S | N | S |
|---|---|---|---|---|---|
| 10 | 10 | 220 | 140 | 1200 | 291 |
| 15 | 14 | 230 | 144 | 1300 | 297 |
| 20 | 19 | 240 | 148 | 1400 | 302 |
| 25 | 24 | 250 | 152 | 1500 | 306 |
| 30 | 28 | 260 | 155 | 1600 | 310 |
| 35 | 32 | 270 | 159 | 1700 | 313 |
| 40 | 36 | 280 | 162 | 1800 | 317 |
| 45 | 40 | 290 | 165 | 1900 | 320 |
| 50 | 44 | 300 | 169 | 2000 | 322 |
| 55 | 48 | 320 | 175 | 2200 | 327 |
| 60 | 52 | 340 | 181 | 2400 | 331 |
| 65 | 56 | 360 | 186 | 2600 | 335 |
| 70 | 59 | 380 | 191 | 2800 | 338 |
| 75 | 63 | 400 | 196 | 3000 | 341 |
| 80 | 66 | 420 | 201 | 3500 | 346 |
| 85 | 70 | 440 | 205 | 4000 | 351 |
| 90 | 73 | 460 | 210 | 4500 | 354 |
| 95 | 76 | 480 | 214 | 5000 | 357 |
| 100 | 80 | 500 | 217 | 6000 | 361 |
| 110 | 86 | 550 | 226 | 7000 | 364 |
| 120 | 92 | 600 | 234 | 8000 | 367 |
| 130 | 97 | 650 | 242 | 9000 | 368 |
| 140 | 103 | 700 | 248 | 10000 | 370 |
| 150 | 108 | 750 | 254 | 15000 | 375 |
| 160 | 113 | 800 | 260 | 20000 | 377 |
| 170 | 118 | 850 | 265 | 30000 | 379 |
| 180 | 123 | 900 | 269 | 40000 | 380 |
| 190 | 127 | 950 | 274 | 50000 | 381 |
| 200 | 132 | 1000 | 278 | 75000 | 382 |
| 210 | 136 | 1100 | 285 | 1000000 | 384 |

Note.—N is population size.
S is sample size.

Sources: Department of Statistics Malaysia Official Portal (DOSM).

### 3.6 Sampling Techniques

The selection of a group of individuals who can provide the relevant information needed to address the current mobile commerce problem can be described as sampling. The process used to draw the sample is a crucial issue that needs to be solved in sampling design. To collect the data, the researcher opts for a purposive sampling. Purposive sampling is a type of non-probability sampling method and has specific characteristics in which are interested. Purposive sampling was chosen since they fit the sample's requirement and it is most commonly used when measuring a difficult-to-reach population (Campbell, 2020). Thus, purposive sampling was used in this study because it better matches the sample to the goals and objectives of the research, increasing the study's rigor and the reliability of the data and findings.

### 3.7 Research Instrument Development

The instrument is a tool used to collect data for research purposes. Three sections make up the questionnaire that was used to gather data and information. The demographic profile of respondents, including their age, gender, level of education and race will be the subject of the data collection in the first section (section A). The second section (section B) of the questionnaire is for the dependent variable, which is intention to adopt mobile commerce. The questions about the three independent variables are presented in the final section (section C) that follow usage barriers, value barriers and trust barriers.

All items written in the questionnaire are stated in two languages, which are English and Malay. The three instruments selected for this study have been confirmed to be valid and reliable. However, it has not been tested among Generation X.

A breakdown and description of the study instrument is summarized below:

Table 3.2: Description of The Study Instrument

| Section | Description |
|---|---|
| A | Demographic profile |
| B | Mobile Commerce Adoption Intention (Dependent Variable) |
| C | Barriers to Introduce Mobile Commerce to Generation X in Malaysia (Independent Variables) <br><br> • usage <br><br> • value <br><br> • trust |

### 3.8 Measurement of The Variables

A hidden attribute that can take one or more values that measures a particular entity is called a measurement variable. It is frequently applied in scientific studies. Measurement variables in statistics are not like mathematical variables, which can have both quantitative and qualitative meanings. Despite the fact that there are four measurement scales, we will employ ordinal scale data in this study since it is more consistent with the research methodology (quantitative). The validity of this research study is to measure the barriers to intentions in the use of mobile commerce in the perception of Gen-X.

Questionnaires are the most suitable method of data collection for certain questions. This method is also commonly used by many researchers because the answers required are very clear. Because it is simpler to rate, the rating scale is employed in the questionnaire. Closed-

ended questions with a range from strongly disagree to strongly agree are used to construct questionnaires. The goal is to simplify the data collection process. A range of data collection techniques are available to researchers, including structured surveys and in-person interviews. Based on study variables such as elements influencing customers' decisions to make purchases online, researchers will develop a series of questions. The questionnaire will be graded on a five-point Likert scale.

The responders can easily examine and select from the list of scale descriptors when using the five-point Likert scale. This method was introduced by psychologist and educator, Rensis Likert. He wanted to measure subjective psychological attitudes in a scientific way. In 1932, he would publish A Technique for the Measurement of Attitudes, where he explained the use of the Likert scale (Jebb, Ng & Tay, 2021). The method was used until now mainly by researchers.

Table 3.3: Five-point Likert Scale

| Characteristics | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Number | 1 | 2 | 3 | 4 | 5 |

**3.9 Procedure for Data Analysis**

A questionnaire or online survey is made with the study's objectives in mind. There are three sections in the survey. Prior to data collection, respondents' permission is obtained. Before the survey is conducted, respondents have to read the consent form and agree to show

that they understood the rights and obligations involved. The survey is then completed by respondents, which will take about 10 minutes. First, questionnaires requesting demographic information that are fill out by respondents. They are then asked to answer questions on the obstacles to introducing mobile commerce to Gen-X in Malaysia and about their intention to use it, as shown in table 3.2.

After receiving the results, we proceed to examine the information. The classification of data analysis techniques based on the study's goals and an explanation of alternate techniques for data collection will be provided.

### 3.9.1 Descriptive Statistics

This study will analyze central tendencies and frequency distribution. Gender, age, marital status, income level and whether or not someone uses mobile commerce are all considered demographic factors. With brief explanations, data will be displayed in a table as a frequency and percentage. Frequency analysis can be conducted to find out mean, median, mode and the standard deviation. Once data has been submitted, descriptive statistics can be used to examine it. It is usual practice to summarize data frequency or measures of central tendency using descriptive statistics (mean, median and mode). Frequency analysis might be used to respond to the initial research question. A descriptive statistics technique called frequency analysis displays the frequency of each response that respondents selected. In order to aid users in analyzing the data and drawing conclusions, SPSS Software may additionally compute the mean, median and mode when frequency analysis is used. Every questionnaire item's mean, standard deviation and coefficient of variation are often provided in the data summary to assess both the independent and dependent variables. After the analyses are finished, the results will be displayed in pie charts.

### 3.9.2 Reliability and Normality Test

After the data has been collected, a reliability test and a normality test will be performed. Based on IBM SPSS Statistic (2017), studying the characteristics of measuring scales and the components that make up the scales is possible using reliability analysis. In addition to providing data on the correlations between the scale's constituent items, the reliability analysis technique creates a variety of regularly used scale reliability measures. To measure inter-rater dependability, one can compute intraclass correlation coefficients. Meanwhile, a test for the normality of data is called normality analysis. The term "normality" refers to a particular type of statistical distribution known as the normal distribution, often known as the bell-shaped curve or the Gaussian distribution. The mean and standard deviation of the data serve as the parameters for the symmetrical continuous distribution known as the normal distribution (Feldman, 2018). For skewness and kurtosis, the absolute value of 2 serves as the standard for the normality test in order to produce data that is normally distributed.

### 3.9.3 Pearson Correlation Analysis

In research from Obilor and Amadi (2018), Pearson correlation analysis is the measurement of an association, relationship, or correlation between two variables to determine whether they are positively or negatively related, or if they are not related at all. If changes in one variable affect or influence changes in the other variable, they are said to be related. Correlation coefficients are used to express the degree of association or relationship between variables when measuring association or relationship. Correlation coefficients, in other words, quantify the strength (direction and magnitude) of an association or relationship between two variables. The size and sign of correlation coefficients might be high or low (magnitude) and positive or negative (direction). The range of correlation coefficients is -1 to +1. While -1 and +1 denote perfect negative and positive correlation coefficients, respectively, a correlation

value of 0 denotes the absence of any correlation (zero relationship). Furthermore, correlation coefficients lower than 0.40 (whether negative or positive 0.40) are considered low, between 0.40 until 0.60 are considered moderate and 0.60 and above are considered strong.

Table 3.4: Relationship Between Coefficient Value and Correlation Level

| Coefficient (r) Value | Correlation Level |
|---|---|
| Lower than 0.40 | Low |
| 0.40 - 0.60 | Moderate |
| Above 0.60 | Strong |

### 3.10 Summary

In this chapter, the investigation of the research methods is the main focus. It relates to the methodology of the study and the methods used to gather data. Along with population data management, sampling techniques, study instruments, data collection techniques, sample sizes and research plans are also covered in this chapter. Also, this chapter concludes with demonstrating data management strategies for researchers.

# CHAPTER 4

# DATA ANALYSIS AND FINDINGS

## 4.1 Introduction

The researcher has distributed a questionnaire to select sample of respondents in order to support the idea stated in the previous chapter. In order to further the objectives mentioned in Chapter 1 of this study, the findings of the questionnaire survey will be analyzed in this chapter. Data analysis has also been done collected using the methods presented in Chapter 3 as a framework. There are four types of testing methods or different analysis that has been used in this research which are descriptive statistics, reliability test, normality test and the last one is Pearson correlation analysis. The final sample that has been evaluated consists of 384 respondents which represent mobile commerce adoption intention among Generation X in Malaysia constitute the final sample that has been analyzed. In this chapter, all descriptive and inferential findings will be collated and discussed. The survey took respondents only 10 minutes to complete and contain three sections of questionnaire plus all the results were intentionally addressed using statistical techniques from the SPSS Software.

## 4.2 Preliminary Analysis

### 4.2.1 Data Editing

Data editing is the process involving the review and revision of collected survey data. Data editing was the first stage of data processing after all of the respondents' completed questionnaires have been collected using questionnaire. Once all the information from the responders had been gathered, it was then entered into an Excel document. When all of the data has been provided to the spreadsheet, the researcher will check to make sure that any missing,

uncertainties and mistakes in the data replies that are also incorrect have been removed in order to ensure that all the responses are complete and the data is error-free.

### 4.2.2 Data Coding

Data coding is the process of classifying the collected data and observations into a number of more relevant and logical categories. Allen (2017) states that, it is a technique for gathering and presenting data to provide a comprehensive account of items that have been seen or recorded. Demographic elements like gender, age, marital status, race, education level, occupation, income level and use of mobile commerce were been used to code the data from this study's initial findings. Next, we used Likert scale to categorize all of the dependent and independent variables questions, with (1) = strongly disagree, (2) = disagree, (3) = neutral, (4) = agree and (5) = strongly agree response in the framework.

Table 4.1: Data Coding for Demographic Profile of Respondents

| Label | Demographic | Variables | Coding |
|-------|-------------|-----------|--------|
| A1 | Gender | Male | 1 |
|  |  | Female | 2 |
| A2 | Age | 40-44 years | 1 |
|  |  | 45-49 years | 2 |
|  |  | 50-54 years | 3 |
|  |  | 55-59 years | 4 |
|  |  | 60-64 years | 5 |
| A3 | Marital Status | Single | 1 |

| | | | |
|---|---|---|---|
| | | Married | 2 |
| | | Balu | 3 |
| | | Bercerai | 4 |
| | | Janda | 5 |
| A4 | Race | Malay | 1 |
| | | Chinese | 2 |
| | | Indian | 3 |
| | | Iban | 4 |
| | | Kagayan | 5 |
| | | Jawa | 6 |
| | | Suluk | 7 |
| | | Murut | 8 |
| | | Bugis | 9 |
| | | Kadazan Dusun | 10 |
| A5 | Education Level | Highschool | 1 |
| | | Diploma | 2 |
| | | Degree | 3 |
| | | Master and above | 4 |

| | | STPM | 5 |
|---|---|---|---|
| | | SPM | 6 |
| | | Sekolah rendah | 7 |
| A6 | Occupation | Unemployed | 1 |
| | | Self-employed | 2 |
| | | Government | 3 |
| | | Private | 4 |
| A7 | Income Level | RM 1,000 or below | 1 |
| | | RM 1,001 – RM 3,000 | 2 |
| | | RM3,001 – RM 5,000 | 3 |
| | | Above RM 5,000 | 4 |
| A8 | Use of Mobile Commerce | User | 1 |
| | | Non-user | 2 |

Table 4.2: Data Coding for Dependent and Independent Variables

| Label | Questions | Coding |
|-------|-----------|--------|
| **DV: Mobile Commerce Adoption Intention** | | |
| B1 | I intend to use mobile commerce. | 1= Strongly Disagree |
| B2 | I intend to use mobile commerce in future. | 2= Disagree |
| B3 | I intend to use mobile commerce in order to increase the convenience. | 3= Neutral |
| B4 | I intend to learn how to use mobile commerce. | 4= Agree |
| B5 | I intend to use mobile commerce more often. | 5= Strongly Agree |
| B6 | I intend to recommend mobile commerce to my friends. | |
| **IV 1: Usage Barriers** | | |
| C1 | In my opinion, mobile commerce services are difficult to use. | 1= Strongly Disagree |
| C2 | In my opinion, mobile commerce services are inconvenient to use. | 2= Disagree |
| | | 3= Neutral |
| C3 | In my opinion, mobile commerce services are slow to use. | 4= Agree |
| | | 5= Strongly Agree |
| C4 | In my opinion, progress in mobile commerce services is unclear. | |

| | | |
|---|---|---|
| | **IV 2: Value Barriers** | |
| D1 | Using mobile commerce services is uneconomical. | 1= Strongly Disagree |
| D2 | Using mobile commerce services does not offer any advantages when compared to other ways of handling financial matters. | 2= Disagree<br><br>3= Neutral |
| D3 | Using mobile commerce services do not increase the ability to control financial matters. | 4= Agree<br><br>5= Strongly Agree |
| D4 | Using mobile commerce services do not eliminate the constraints of time and space when conducting transactions. | |
| | **IV 3: Trust Barriers** | |
| E1 | Transaction via mobile commerce services is safe. | 1= Strongly Disagree<br><br>2= Disagree |
| E2 | Privacy of mobile commerce services users is well protected. | 3= Neutral<br><br>4= Agree |
| E3 | Mobile commerce services transactions are reliable. | 5= Strongly Agree |

| E4 | Security measures in mobile commerce services are adequate. | |
|---|---|---|

### 4.2.3 Data Entry

The survey has been send to the responders through questionnaire (google form) via Instagram, Facebook, WhatsApp and Telegram. Once all of the data has been reviewed, corrected and coded, it will then be imported into SPSS Software for analysis. In the end, 384 complete questionnaires were obtained for this study, and none of the 384 had any unanswered questions. As a result, all 384 responses were entered into the SPSS program without being rejected. For this study, it took the researchers about a month to compile replies from participants. It is also took an additional two weeks to edit, code and enter the data into SPSS.

### 4.3 Demographic Profile of Respondents

Statistics on a population's traits or trends are known as demographics. A statistical depiction of socioeconomic statistics such as profession, education, earnings, marriage rates, birth and death rates is known as demographic data. Analysing a population's demographics including age, race and gender is known as demographic analysis.

The significance of this study's findings consists in their contribution to the topic of Generation X in Malaysia involvement and identification of the demographic characteristics of baby boomers that are associated to their comprehension of using mobile commerce adoption intention. The results of this research study will help those who need it analyze or identify their target group. In this research, it covered eight demographic profiles started with gender, age, marital status, race, education level, occupation, income level and lastly use of mobile commerce.

### 4.3.1 Gender

Table 4.3: Data of Respondent's Gender

| GENDER | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 158 | 41.0 | 41.0 | 41.0 |
| | Female | 226 | 59.0 | 59.0 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |
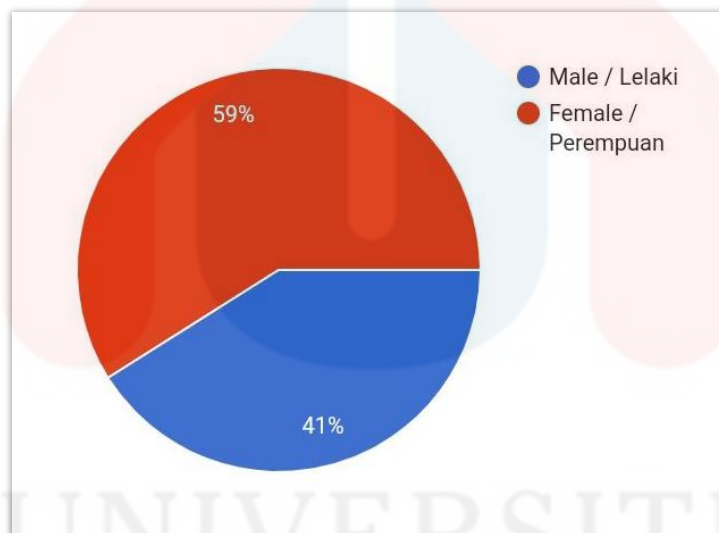


Diagram 4.1: Percentage of Respondent's Gender

Table 4.3 is the table of gender produces from questionnaire. Diagram 4.1 shows that 59.0% of Generation X in Malaysia that answered the questionnaire were female and only 41.0% were male. Generally, more women than men responded to the survey regarding to this research study. In contrast, more women are concern about the mobile commerce adoption intention rather than men.

**4.3.2 Age**

Table 4.4: Data of Respondent's Age

| AGE | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 40-44 years | 165 | 43.1 | 43.1 | 43.1 |
| | 45-49 years | 75 | 19.5 | 19.5 | 62.5 |
| | 50-54years | 82 | 21.3 | 21.3 | 83.9 |
| | 55-59 years | 39 | 10.1 | 10.1 | 94.0 |
| | 60-64 years | 23 | 6.0 | 6.0 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |
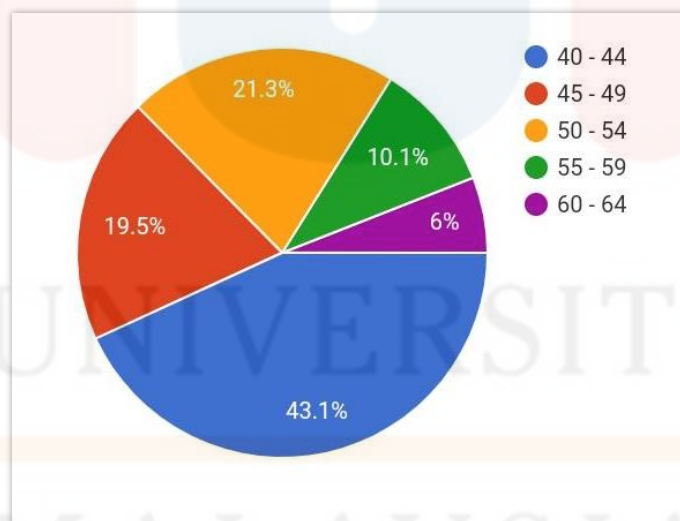


Diagram 4.2: Percentage of Respondent's Age

This two-part question is widely used in surveys and intended to ensure the accuracy of age information and lower non-response rates. It is crucial to collect high quality age data since age plays a significant role in deciding federal funding. Age data are exposed to many different purposes. Hence, it is essential that the data are of high quality. Table 4.4 shows the

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age distribution of respondents who took part in the questionnaire survey. This study only targeted the Generation X in Malaysia. Nonetheless, the respondents' age profile is regarded as adequate. Diagram 4.2 shows that ages 40-44 years provided the majority of survey responses with 43.1%, while the lowest number of respondents came from the range of 60-64 years old with only 6.0%.

### 4.3.3 Marital Status

Table 4.5: Data of Respondent's Marital Status

| MARITAL STATUS | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Single | 96 | 24.9 | 24.9 | 24.9 |
| | Married | 276 | 71.9 | 71.9 | 96.9 |
| | Other | 1 | .3 | .3 | 97.1 |
| | Balu | 5 | 1.3 | 1.3 | 98.4 |
| | Bercerai | 3 | .8 | .8 | 99.2 |
| | Janda | 3 | .8 | .8 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |
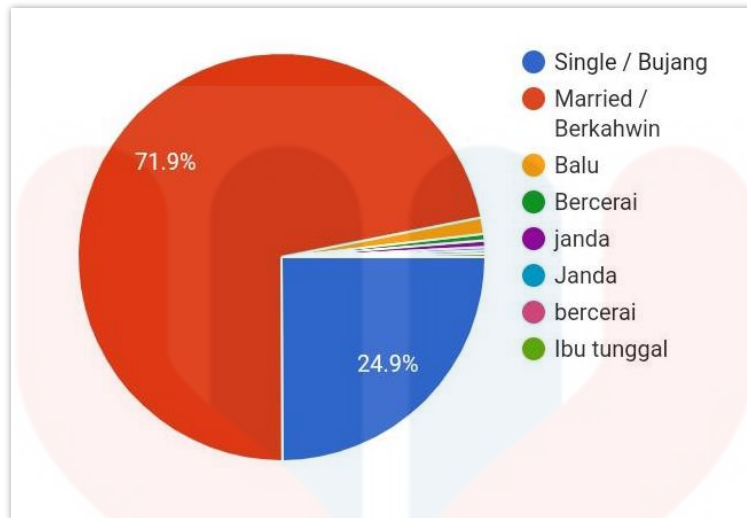
Diagram 4.3: Percentage of Respondent's Marital Status

The legally recognized marital state is marital status. This study divides marital status into two major categories: single and married. According to the results of marital status, diagram 4.3 shows that the majority of respondents were married with 71.9%, followed by 24.9% being single while 3.2%, the rest were classified as others that include divorced and widow. Thus, married tent to be the larger group status who answered this questionnaire rather than other.

### 4.3.4 Race

Table 4.6: Data of Respondent's Race

| RACE | | | | | |
|------|------|-----------|---------|---------|------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Malay | 318 | 82.3 | 82.3 | 82.3 |
| | Kadazan Dusun | 4 | 1.0 | 1.0 | 83.9 |
| | Chinese | 23 | 6.0 | 6.0 | 89.8 |
| | Indian | 27 | 7.0 | 7.0 | 96.9 |

| | Other | 3 | .8 | .8 | 97.7 |
|---|---|---|---|---|---|
| | Kagayan | 2 | .5 | .5 | 98.2 |
| | Jawa | 1 | .3 | .3 | 98.4 |
| | Suluk | 2 | .5 | .5 | 99.0 |
| | Murut | 1 | .3 | .3 | 99.2 |
| | Bugis | 3 | .8 | .8 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |
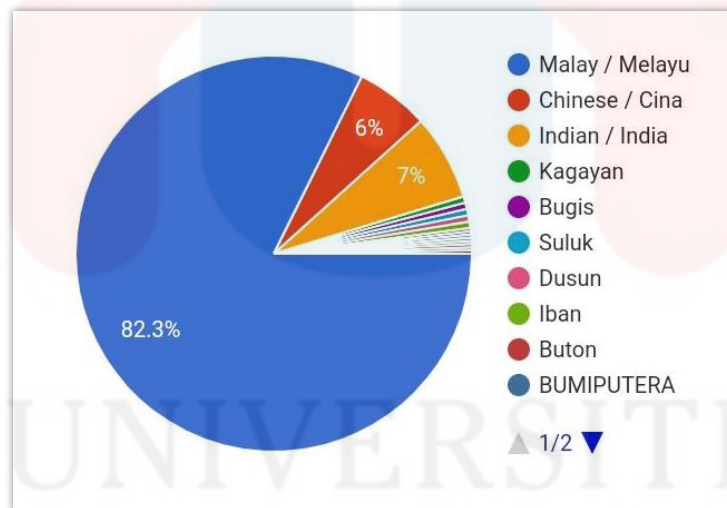


Diagram 4.4: Percentage of Respondent's Race

Malaysia has numerous traditional medical systems that represent the country's diverse ethnic populations. These can be categorised into four primary groups: native traditional practises, traditional Indian practises, traditional Chinese practises and modern medical practises. However, we also have another races that are common in Malaysia such as Kagayan, Jawa, Suluk, Murut, Bugis and Kadazan Dusun. Based on diagram 4.4, the races have the highest percentage that answered the questionnaire were from Malay with 82.3% of

respondents were collected. Meanwhile, Indian respondents placed the second highest percentage with 7.0%, following by Chinese with 6.0% of respondents in this research study. Meanwhile, the remaining were came from Jawa, Suluk, Bugis and others.

### 4.3.5 Education Level

Table 4.7: Data of Respondent's Education Level

| EDUCATION LEVEL | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | High School | 154 | 39.7 | 39.7 | 39.7 |
| | Diploma | 82 | 21.0 | 21.0 | 61.5 |
| | Degree | 124 | 32.5 | 32.5 | 93.8 |
| | Master and above | 16 | 4.2 | 4.2 | 97.9 |
| | Other | 2 | .5 | .5 | 98.4 |
| | STPM | 2 | .5 | .5 | 99.0 |
| | Sekolah rendah | 4 | 1.0 | 1.0 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |
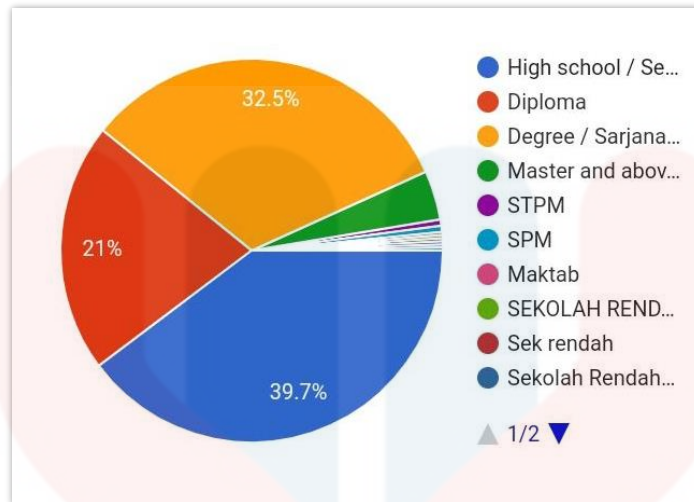
Diagram 4.5: Percentage of Respondent's Education Level

The developmental disparities among pupils and the design of the learning environments determine educational levels. Overall, from this research study we can see that different type of education level for Generation X in Malaysia influences the answers about their adoption intention towards mobile commerce. Based on diagram 4.5, the highest education level was from high school with 39.7%, while the rest respondents came from diploma, degree, master and others education level including primary school and pre-university (STPM).

### 4.3.6 Occupation

Table 4.8: Data of Respondent's Occupation

| OCCUPATION | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Unemployed | 69 | 17.9 | 17.9 | 17.9 |
| | Self-employed | 83 | 21.6 | 21.6 | 39.6 |
| | Government | 129 | 33.8 | 33.8 | 73.2 |

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| | | | | |
|---|---|---|---|---|
| Private | 103 | 26.8 | 26.8 | 100.0 |
| Total | 384 | 100.0 | 100.0 | |
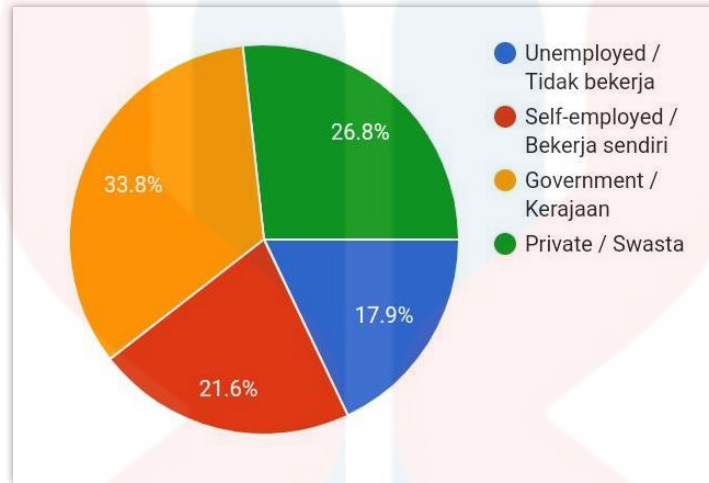


Diagram 4.6: Percentage of Respondent's Occupation

A significant factor that gives our lives purpose is our work (Ward & King, 2017). Meaning that occupation is inversely correlated with one another. In this research study, we had provided four types of occupation which are unemployed, self-employed, government and private. Due to diagram 4.6, majority of respondents were a government with 33.8%, followed by the private sector with 26.8%, 21.6% for self-employed and 17.9% were unemployed.

### 4.3.7 Income Level

Table 4.9: Data of Respondent's Income Level

| INCOME LEVEL | | | | |
|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | RM 1,000 or below | 88 | 22.9 | 22.9 | 22.9 |
| | RM 1,001- RM3,000 | 139 | 36.1 | 36.1 | 59.1 |
| | RM 3,001 – RM5,000 | 72 | 19.0 | 19.0 | 77.9 |
| | Above RM 5,000 | 85 | 22.1 | 22.1 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |
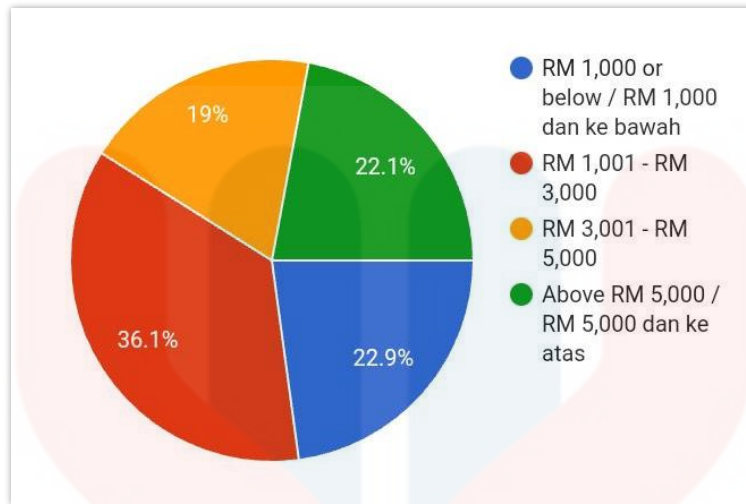
Diagram 4.7: Percentage of Respondent's Income Level

In order to understand a person's financial situation, a questionnaire including questions about income was used. This study provides information about a person's annual income, whether it is RM 1,000 or below, RM 1,001 – RM 3,000, RM 3,001 – RM 5,000 and above RM 5,000. Based on diagram 4.7, the highest income level was from range RM1,001 – RM3,000 with 36.1%, followed by RM 1,000 or below with 22.9%, 22.1% from range above RM5,000 and the lowest income level came from range RM 3,001 – RM 5,000 with 19.0%.

### 4.3.8 Use of Mobile Commerce

Table 4.10: Data of Respondent's Use of Mobile Commerce

| USE OF MOBILE COMMERCE | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | User | 307 | 80.0 | 80.0 | 80.0 |
| | Non-user | 77 | 20.0 | 20.0 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |

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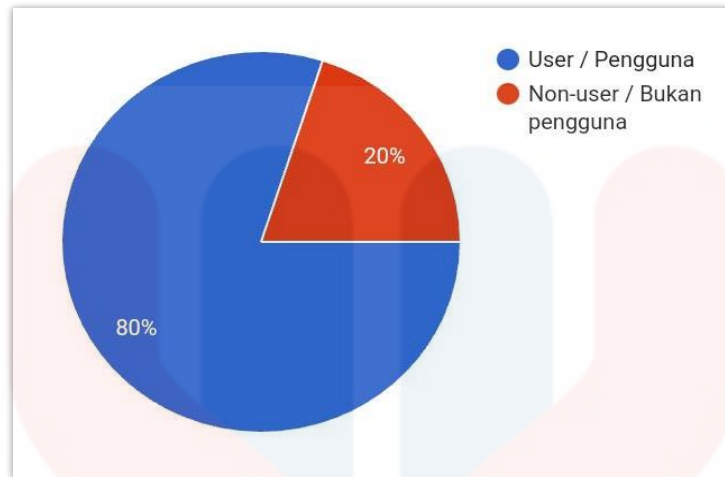
Diagram 4.8: Percentage of Respondent's Use of Mobile Commerce

According to Gao and Shao (2019), mobile commerce is the practice of conducting online business using portable, wireless devices such as mobile phones, tablets and personal digital assistants. It's a mobile-compatible element of electronic commerce. From perception of Generation X in Malaysia, the result shows that they also have been used mobile commerce in their daily lives. Diagram 4.8 illustrated that the use of mobile commerce among Generation X consist of 80.0% users and non-users with 20.0%.

## 4.4 Descriptive Analysis

Descriptive analysis, often known as descriptive analytics or descriptive statistics, is the technique of using statistical techniques to describe or characterise a collection of data. One of the most widely common types of data analysis is descriptive analysis, which is renowned for its ability to draw meaningful conclusions from previously unbroken data (Parampreet Kaur, 2018). In this part, there were six questions asked to measure the mobile commerce adoption intention (DV) while four questions asked to measure usage, value and trust barriers (IV) respectively. Through the choices made for respondents ranged from strongly disagree to strongly agree, descriptive analysis was conducted to examine the level of dependent variable and independent variables.

Table 4.11: Summary of Descriptive Statistics

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| **Variables** | **N** | **Minimum** | **Maximum** | **Mean** | **Std. Deviation** |
| Mobile commerce adoption intention (DV) | 384 | 1 | 5 | 4.07 | 0.843 |
| Usage barriers (IV1) | 384 | 1 | 5 | 2.52 | 1.011 |
| Value barriers (IV2) | 384 | 1 | 5 | 2.63 | 1.011 |
| Trust barriers (IV3) | 384 | 1 | 5 | 3.50 | 0.873 |

Table 4.11 displayed the overall means and standard deviations of three IVs and a DV in this study. In summary, the means of all independent variables are more agreeable, ranging from 2.52 to 3.50, whereas the means of the dependent variable are disagreeable (4.07). The table above also displayed the standard deviations, which represent the data dispersion for all variables. In summary, the lowest standard deviation is 0.843 and the highest is 1.011.

**4.5 Validity and Reliability Test**

Based on IBM SPSS Statistic (2017), studying the characteristics of measuring scales and the components that make up the scales is possible using reliability analysis. In addition to providing data on the correlations between the scale's constituent items, the reliability analysis technique creates a variety of regularly used scale reliability measures. This part addressed the validity of the research questionnaire used in this study, which serves as dependent variable

(mobile commerce adoption intention) and the independent variables (usage, value and trust barriers). This part analyzed and reported the Cronbach's alpha values for each question in each variable and section.

Table 4.12: Summary of Reliability Test

| Variables | Number Of Item | Cronbach's Alpha | Remarks |
|---|---|---|---|
| Mobile commerce adoption intention (DV) | 6 | .950 | Very good |
| Usage barriers (IV1) | 4 | .920 | Very good |
| Value barriers (IV2) | 4 | .883 | Good |
| Trust barriers (IV3) | 4 | .893 | Good |

The results of the reliability test for each variable are shown in Table 4.12. If a variable's Cronbach's alpha has a minimum value of 0.7 and is more than or equal to 0.8, it is deemed dependable (Taber, 2017). As a result, it is possible to draw the conclusion that all the items modified for the research questionnaire are trustworthy and reliable.

**4.6 Normality Test**

According to Feldman (2018), test for the normality of data is called normality analysis. The term "normality" refers to a particular type of statistical distribution known as the normal distribution, often known as the bell-shaped curve or the Gaussian distribution. For skewness and kurtosis, the absolute value of 2 serves as the standard for the normality test in order to produce data that is normally distributed.

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Table 4.13: Summary of Normality Test

| | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Mobile commerce adoption intention (DV) | .154 | 384 | .000 | .854 | 384 | .000 |
| Usage barriers (IV1) | .126 | 384 | .000 | .930 | 384 | .000 |
| Value barriers (IV2) | .146 | 384 | .000 | .940 | 384 | .000 |
| Trust barriers (IV3) | .110 | 384 | .000 | .956 | 384 | .000 |

The results for the dependent variable and independent variables were not common, as the table above illustrates. This is due to the fact that data is regarded as normal if the value of the Sig. Shapiro-Wilk Test is greater than 0.05. The data deviates significantly from a normally distributed if the result is less than 0.05. The data for this questionnaire was uncommon for a number of reasons that was because mostly users of mobile commerce among Generation X in Malaysia were using mobile commerce but they are aware about the usage barriers, value barriers and trust barriers in mobile commerce adoption intention.

**4.7 Hypotheses Testing Using Pearson Correlation Analysis**

Pearson correlation analysis was used to test the relationship between the barriers (Usage, Value and Trust) and mobile commerce adoption intention. The results of Pearson correlation analysis were shown in the table below:

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Table 4.14: Summary of Pearson Correlation Analysis

| Hypotheses | Sig. value | Conclusion | Coefficient value | Remarks |
|---|---|---|---|---|
| H1 | 0.007 | Not accepted | 0.137 | Weak |
| H2 | 0.053 | Not accepted | 0.081 | No relationship |
| H3 | 0.000 | Accepted | 0.591 | Moderate |

The results of this study showed in the Table 4.14 that only trust barriers has a significant relationship with mobile commerce adoption intention but usage and value barriers had found to have no significant relationship with mobile commerce adoption intention. Based on the results, the r-value of usage barriers is 0.137 and the p-value is 0.007. This result has indicated that there is no significant relationship there. It is because in the era of technological sophistication, everyone depends on mobile phones and this is not an obstacle for them to use mobile commerce including Generation X in Malaysia. In term of value barriers, the finding shows that there is no significant relationship with mobile commerce adoption intention (r = 0.081, p = 0.053). A possible explanation is value is not an obstacle for them because they appreciate every advantage offered by mobile commerce in this day as it can save their time and very convenience to use. Besides, as displayed in Table 4.14, there was a significant relationship between trust barriers with mobile commerce adoption intention (r = 0.591, p = 0.000). The degree of correlation of r value (0.591) has shown a medium strength. The result is in line with previous studies which found that trust barriers are a factor in changing individual decisions to adopt mobile commerce. Mobile commerce is very different compared to other commerce because mobile commerce uses wireless networks to communicate and do some transaction. With this, it causes a trust barrier to an individual because it will give individuals

concern about the security of data transmission and storage, especially for transactional activities that require the provision of personal information (Mazen Ali, 2017). In addition, according to Yeon, Park and Lee (2019), trust is essential whenever there is risk, uncertainty, or interdependence, it plays a central role in both interpersonal and business relationships. Thus, trust barriers may have lower adoption intention on mobile commerce among Generation X. As a result, trust barriers is a significant predictor of mobile commerce adoption intention.

### 4.7.1 Hypothesis 1

H1: There is a significant relationship between usage and adoption intention of mobile commerce among Generation X in Malaysia.

Table 4.15: Hypothesis Testing Between Usage Barriers And Mobile Commerce Adoption Intention

| Correlation | | | |
|---|---|---|---|
| | | **Mobile commerce adoption intention** | **Usage Barriers** |
| Mobile commerce adoption intention | Pearson Correlation | 1 | -.138** |
| | Sig. (2-Tailed) | . | .007 |
| | N | 384 | 384 |
| Usage Barriers | Pearson Correlation | -.138** | 1 |
| | Sig. (2-Tailed) | 0.07 | . |
| | N | 384 | 384 |

### 4.7.2 Hypothesis 2

H2: There is a significant relationship between value and adoption intention of mobile commerce among Generation X in Malaysia.

Table 4.16: Hypothesis Testing Between Value Barriers And Mobile Commerce Adoption Intention

| Correlation | | Mobile commerce adoption intention | Value Barriers |
|---|---|---|---|
| Mobile Commerce adoption intention | Pearson Correlation | 1 | -.099** |
| | Sig. (2-Tailed) | . | .053 |
| | N | 384 | 384 |
| Value Barriers | Pearson Correlation | -.099** | 1 |
| | Sig. (2-Tailed) | .053 | . |
| | N | 384 | 384 |

### 4.7.3 Hypothesis 3

H3: There is a significant relationship between trust and adoption intention of mobile commerce among Generation X in Malaysia.

Table 4.17: Hypothesis Testing Between Trust Barriers And Mobile Commerce Adoption Intention

| Correlation | | Mobile commerce | Trust Barriers |
|---|---|---|---|

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| | | adoption intention | |
|---|---|---:|---:|
| Mobile commerce adoption intention | Pearson Correlation | 1 | .563** |
| | Sig. (2-Tailed) | . | .000 |
| | N | 384 | 384 |
| Trust Barriers | Pearson Correlation | .563** | 1 |
| | Sig. (2-Tailed) | .000 | . |
| | N | 384 | 384 |

## 4.8 Summary

In this chapter, data analysis of information from a pass review has been finalized. Data quality and reliability test investigations have been finished in order to assess the stability and accuracy of data and equipment. As a result, every final outcome is extremely trustworthy and reliable in every way. This analysis then results in hypothesis testing using Pearson correlation analysis to verify the relationship between the supporting components. Additionally, a descriptive analysis of the data processing and response statuses for the items under investigation was completed.

## CHAPTER 5

## DISCUSSION AND CONCLUSION

### 5.1 Introduction

From this chapter, the study discusses and explains the results of the study through the Pearson correlation coefficient. A summary of the results has been developed based on issues and previous studies in chapter 2. The researchers have also discussed their assumptions on hypothesis testing whether the research hypothesis is accepted or rejected. This chapter also discusses the objective formulation of results according to the objectives of the study presented in chapter 1. Finally, recommendations for further research and the conclusion of the study are mentioned in the last section.

### 5.2 Key Findings

The main objective of this study is to identify the relationship between barriers usage, value, trust and adoption intention of mobile commerce among Generation X in Malaysia. Based on the findings in chapter 4, the researcher agrees that trust does affect the intention to use mobile commerce while usage and value do not affect the intention to use mobile commerce among Generation X in Malaysia. Table 5.1 exhibits the summary of the results regarding objectives that are to find the relationship between usage, value, trust and adoption intention of mobile commerce among Generation X in Malaysia.

Table 5.1: Findings of The Result

| Hypotheses | Result | Findings of data analysis |
|---|---|---|
| H1: There is a significant relationship between usage and adoption intention of mobile commerce among Generation X in Malaysia. | r = - 0.137** <br><br> p = 0.007 <br><br> Weak | H1 is not accepted |
| H2: There is a significant relationship between value and adoption intention of mobile commerce among Generation X in Malaysia. | r = - 0.081 <br><br> p = 0.053 <br><br> No relationship | H2 is not accepted |
| H3: There is a significant relationship between trust and adoption intention of mobile commerce among Generation X in Malaysia. | r = 0.591** <br><br> p = 0.000 <br><br> Moderate | H3 is accepted |

## 5.3 Discussion

### 5.3.1 Hypothesis 1 (usage barriers)

From Table 5.1, the Pearson Correlation Coefficient for the usage, showed the p-value of 0.007 which is less than the alpha value (0.05) and the r-value is - 0.137. Table 5.1 also showed the 0.007 of p-value from coefficient which the results indicates that there is a

significant between usage and adoption intention of mobile commerce among Generation X in Malaysia.

Previous research findings have stated that the use of mobile commerce will be affected if the disabled skills in reading and writing are decreasing which will restrict usage. Based on the findings of the study, most Generation X do not agree that the "usability" feature is an obstacle for them to use mobile commerce. The majority of them are already proficient in using mobile. According to findings by Adipon Euajarusphan (2021), Generation X likes to use media such as television (96.50%), followed by newspapers (91.50%), websites (61.25%) and online social media (60.75. Therefore, the findings of this study do not match previous studies. This is because many of the previous studies were taken from 2020 to 2017. Researchers think they have been proficient in using mobile commerce since the Covid-19 pandemic. The Movement Control Order (MCO) makes everyone have to use online payments and purchases only.

### 5.3.2 Hypothesis 2 (value barriers)

The Pearson Correlation Coefficient of value has shown that the p-value of that factor is 0.053 while the r-value is - 0.081. It is proved a negative relationship between these two variables because the r-value show a negative result. Therefore, the research fails to reject the unaccepted hypothesis. So, the value indicates that there is no relationship by barrier of mobile commerce intention, and it is not a factor that hinders mobile commerce usage intention among Generation X.

Based on this study, the majority of respondents do not agree that the value of mobile commerce itself is the main obstacle for them when using it. Respondents are more concerned with the security of mobile commerce. The most important element when we do business of buying and selling through mobile commerce is the issue of security. Traders need to have a

way to be sure customers feel safe and comfortable when using mobile commerce. So, we need to ensuring the very best security quality value provided. Online trading is not possible without a secure environment, especially for transactions involving financial value. This study looks more at the value of mobile commerce services themselves. Value service and customer satisfaction both will be a factor for users to compare product or service. Customer value and satisfaction have been extensively studied in previous studies and have received the general attention of researchers that service quality is the cause satisfaction. According to Zameer (2019), although customer satisfaction is not the main goal for traders, it is a factor that determines customer loyalty. Service value and satisfaction are two different but closely related things in research on mobile commerce value. If the value is enhanced but not based on customer needs, customers will never satisfy with the service.

### 5.3.3 Hypothesis 3 (trust barriers)

Based on the Table 5.1 findings of the result, the Pearson Correlation Coefficient value of this factor showed the p-value of 0.000 and 0.591 for r-value. Therefore, the researchers successfully proved that this hypothesis is positive and is an obstacle to the intention of Generation X to use mobile commerce.

Researchers agree with previous studies that trust is one of the most important elements to convince consumers to use mobile commerce. In addition, researchers believe that Generation X are likely to use mobile commerce frequently because it is easy for them to pay for goods without having to hold a lot of money. Furthermore, they tend to buy home goods online nowadays. Among the trust factors that cause Generation X to change their intentions are the acceptance of technology, quality, risk, individuals, mobile applications and behavior (Subhro.S, 2020). According to Liébana-Cabanillas (2017), mobile commerce is still in the initial phase of development. Therefore, many users are still cautious and unfamiliarity with

most of its features aggravates the feelings of some users. Customer trust is critical to the future growth of mobile commerce. Building customer trust is a difficult process that involves technology and business practices, as well as moving from initial trust formation to ongoing trust development.

## 5.4 Implications of The Study

This study aims to understand the barriers that influence the intention to use mobile commerce among generation-x. This study gives guidance to businesses, especially traders who sell products on online applications such as Shoppe, Lazada and websites. With the widespread use of mobile commerce in recent times, today's traders need to be aware of the current changes in our business world. Indifference to current changes will harm business little by little, especially when the world is moving towards the development of the digital world. In addition, the use of mobile commerce has led to many cashless transactions. It can improve customer service because the payment process is faster and saves purchasing time. Not only that, traders can also save a lot of costs such as shop rent, office equipment, and so on. Therefore, this mobile commerce has many benefits. Not only to consumers but also traders especially. After the movement control order (MCO) season, people have been using mobile phones a lot especially generation-x and they tend to buy online.

According to Statista (2017), the population of smartphone owners is increasing with the forecast that the number of smartphone users worldwide will exceed 5 billion in 2019 (Statista, 2017). In a PwC study, 36% of consumers say that mobile phones will be the purchasing tool of today and confirm that smartphones are the main enabler for mobile commerce (PwC, 2017). Mobile commerce is a transaction with monetary value conducted online. Mobile commerce is also known as e-commerce, where its use is necessarily through

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mobile phones and wireless networks (Chhonker, Verma, & Kar, 2017). It can be used anytime and anywhere and users can buy and sell goods and services through wireless devices. But every good thing has its bad side. The use of mobile commerce such as encouraging users to share data. Mobile commerce users will be more inclined to share their data because they have a higher tolerance for risk. The growth of smartphone usage and the desire of businesses to engage with them through mobile commerce, research seeks to understand the factors that are hindering the adoption of mobile commerce.

## 5.5 Limitations of The Study

There are some limitation found during this study. Several limitations have been addressed in this research. First, this study has gathered the data through a questionnaire survey because it is cost-effective. However, a questionnaire survey is not a good method because it takes time to collect the questionnaires and may not be possible to collect the exact number that were distributed. A face-to-face interview should be carried out in order to obtain information that is more accurate and trustworthy. Time and location-synchronous communication is a feature of this approach. It enables interviewers to gain additional information from the interview by utilizing social or nonverbal cues. In addition, there is no delay between the question and answer, allowing the interviewee to respond immediately and ensuring that their responses are more spontaneous. In addition, a cross-sectional study was used to concentrate on the obstacles to the adoption of mobile commerce among Generation X in Malaysia for a limited time. It only occurred at a specific time and concentrated on a phenomenon because the information obtained only reflected the situation in Malaysia at the time, it may no longer be relevant in the future. As time goes on, the finding might become out of date. The longitudinal approach is strongly suggested because it allows researchers to

examine a longer period of time rather than just a specific time period. Longitudinal data can provide more in-depth information about individuals' change.

### 5.6 Recommendations for Future Research

Based on this study, researchers made the following recommendation for the future researchers. Firstly, the sample size could be specific in the future research to emphasize the topic about intention to use mobile commerce among Generation X. This is because the respondents taken are from Malaysia. Future researchers should specific the sample size by conducting future study in each states only or else. Other than that, the researcher recommends several suggestions to further improve the result of the study. Researchers need to manage enough time to collect data in a certain site has been chosen. The time management was important to allocate a task and collect all sample respondents in a certain period. Next, researchers also recommend to choosing the right respondent to answer the entire questionnaire that had been distributed. This way will provide researchers good results. Last but not least, future researchers should focus on methods like through a direct approach which was face to face method during the data collection because the targeted respondents in this research is Generation X because some of them are unfamiliar with technology.

### 5.7 Overall Conclusion of The Study

The aim of this study was to determine factors of obstacles to intent in mobile commerce adoption perception of Generation X in Malaysia. Hence, this study was to find out what Generation X in Malaysia thinks are holding them back from using mobile commerce. Usage barriers, value barriers and trust barriers was chosen to be an obstacle to intent mobile commerce adoption towards Generation X. The data analysis shows that Generation X has an above average degree of adoption and use of m-commerce based on the data from the

respondents. Despite not having access to the internet network and technology when they were born or raised, Generation X has successfully adopted and used m-commerce. There were 384 questionnaires that have been collected from the targeted respondents. Those independent and dependent variables were analyzed by Pearson Correlation Coefficient to determine the relationship between dependent variable and independent variables.

In a nutshell, this study fulfilled all of the goals and questions of the research. The statistical significance of the relationships that exist between the variables is established. The relationship that exist between the variables are shown to be at least one statistically significant. According to the findings of this research, only trust barriers has a significant impact on Generation X's adoption of mobile commerce in Malaysia. Meanwhile, usage barriers and value barriers have no significant impact on mobile commerce adoption intention. In addition, this study finds that Generation X in Malaysia have the same adoption intention regardless of whether they use mobile commerce or not.

## REFERENCES

Abdullah, H. O., Muhsin Thajil, K., Alnoor, A., Al-Abrrow, H., Khaw, K. W., Chew, X., & Sadaa, A. M. (2022). Predicting determinants of use mobile commerce through modelling non-linear relationships. *Central European Business Review*, *11*(5), 23-47.

Ajzen, I. (1989). Attitude structure and behavior. En A. R. Pratkanis, S. J. Breckler, A. G. Greenwald (Eds.), Attitude Structure and Function, (pp. 241–274). Lawrence Erlbaum Associates.

Alhamzah Alnoor, Victor Tiberius, Abbas Gatea Atiyah, Khai Wah Khaw, Teh Sin Yin, XinYing Chew, Sammar Abbas. (2022) How Positive and Negative Electronic Word of Mouth (eWOM) Affects Customers' Intention to Use Social Commerce? A Dual-Stage Multi Group-SEM and ANN Analysis. *International Journal of Human–Computer Interaction* 0:0, pages 1-30.

Aristotelis Chantzaras & Nasiopoulos K. Dimitrios & D. S. Vlachos. (2017). "Mobile Commerce and Success Factors. Simulation and Modeling of the Problem,". *Springer Proceedings in Business and Economics,.* in: Androniki Kavoura & Damianos P. Sakas & Petros Tomaras (ed.), Strategic Innovative Marketing, pages 349-355, Springer.

Australian Trade and Investment Commission (Austrade). (2020). E-Commerce In Malaysia. In *E-Commerce Malaysia Guide Report* (No. 18-19–367). Commonwealth of Australia. PDF

Barati, S., & Mohammadi, S. (2017). An Efficient Model to Improve Customer Acceptance of Mobile Banking, World Congress on Engineering and Computer Science, 2, 1-5.

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, *25*(8).

Chen T, Samaranayake P, Cen X, Qi M and Lan Y-C. (2022). The Impact of Online Reviews on Consumers' Purchasing Decisions: Evidence From an Eye-Tracking Study. *Front. Psychol.* 13:865702.

E.H. Jung, J. Walden, A.C. Johnson & S.S. Sundar. (2017). Social Networking In The Aging Context: Why Older Adults Use Or Avoid Facebook Telematics Inf., 34 (7) pp. 1071-1080.

F. Liébana-Cabanillas, V. Marinkovic, Z. Kalinic. (2017). A SEM-neural network approach for predicting antecedents of m-commerce acceptance, *International Journal of Information Management.* 37 (2017), pp. 14-24, 10.1016/j.ijinfomgt.2016.10.008.

Fawzy, S. F., & Esawai, N. (2017). Internet banking adoption in Egypt: Extending technology acceptance model. *Journal of Business & Retail Management Research*, *12*(01).

Feldman, K. (2018, November 7). *Normality Test*. isixsigma.com.

Gaganpreet Sharma. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research* , *3*(7), 749–752.

Gao, K., y Shao, X. (2019). Adoption Research of the M-commerce Application Based on the Perspective of Supply Chain Management in Shipping Industry. Journal of Coastal Research, 83(sp1), 839.

Ghazali, E. M., Mutum, D. S., Chong, J. H., & Nguyen, B. (2018). Do consumers want mobile commerce? A closer look at M-shopping and technology adoption in Malaysia. *Asia Pacific Journal of Marketing and Logistics*, *30*(4), 1064-1086.

Heinze, J., Thomann, M. and Fischer, P. (2017). "Ladders to m-commerce resistance: a qualitative means-end approach", Computers in Human Behaviour, Vol. 73, pp. 362-374.

Helga Laksita Asastani, Harisno, Victory Haris Kusumawardhana, Harco Leslie Hendric Spits Warnars. (2018). Factors Affecting the Usage of Mobile Commerce using Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT). *Indonesian Association for Pattern Recognition International Conference (INAPR).*

J. Borraz-Mora, V. Bordonaba-Juste, Y. Polo-Redondo. (2017). Functional barriers to the adoption of electronic banking: the moderating effect of gender. *Rev. Econ. Apl., 25 (75) (2017).* pp. 87-107.

J.J. Hew, L.Y. Leong, G.W.H. Tan, K.B. Ooi, V.H. Lee. (2017). The age of mobile social commerce: an Artificial Neural Network analysis on its resistances*, Technological Forecasting and Social Change.* vol. 3, no. 2, pp. 311-324.

Jebb AT, Ng V and Tay L. (2021). A Review of Key Likert Scale Development Advances: 1995–2019, *Front. Psychol.* 12:637547.

Ju, N.; Lee, K.-H. (2020). Perceptions and Resistance to Accept Smart Clothing: Moderating Effect of Consumer Innovativeness*, Applied Sciences.* 11(7), 3211.

Khai Wah Khaw, Alhamzah Alnoor, Hadi Al-Abrrow, XinYing Chew, Abdullah Mohammed Sadaa, Sammar Abbas & Zeeshan Zaib Khattak (2022). Modelling and Evaluating Trust in Mobile Commerce: A Hybrid Three Stage Fuzzy Delphi, Structural Equation Modeling, and Neural Network Approach. *International Journal of Human–Computer Interaction.*

Krishna Moorthy, Ching Suet Ling, Yeong Weng Fatt, Chan Mun Yee, Elaine Chong Ket Yin, Kwa Sin Yee, Lee Kok Wei. (2017). Barriers of Mobile Commerce Adoption Intention: Perceptions of Generation X in Malaysia. *Journal of Theoretical and Applied Electronic Commerce Research*, *12*(2), 37–53.

Lissitsa, S., y Kol, O. (2019). Four generational cohorts and hedonic m-shopping: Association between personality traits and purchase intention. Electronic Commerce Research.

Liu, D. and Li, M. (2019). "Exploring new factors affecting purchase intention of mobile commerce: trust and social benefit as mediators", International Journal of Mobile Communications, Vol. 17, pp. 108-125.

M.S. Chhonker, D. Verma, A.K. Kar. (2017). Review of technology adoption frameworks in mobile commerce, *Procedia Computer Science.* 122 (2017), pp. 888-895, 10.1016/j.procs.2017.11.451

Mahatanankoon, P., & Vila-Ruiz, J. (2017). Why Won't Consumers Adopt M- Commerce? An Exploratory Study. Journal of Internet Commerce, 6(4), 113- 128.

Malaysian Communications and Multimedia Commission. (2013). Hand phone users survey 2013. Retrieved November 18, 2022, from SKMM-Handphone-Survey-2011.pdf

Mazen Ali. (2017) Investigating Maturity of Mobile Commerce Adoption: A Qualitative Study. *Journal of Internet Banking and Commerce, December 2017, vol. 22, no. 3*.

Natarajan, T., Balasubramanian, S.A. and Kasilingam, D.L., (2017). Understanding the intention to use mobile commerce applications and its influence on value sensitivity. Journal of Retailing and Consumer Services, 37, pp.8-22.

O. Dastanea, C.L Goia & F.Rabbanee. (2020). A synthesis of constructs for modelling consumers' perception of value from mobile-commerce (M-VAL). *Journal of Retailing and Consumer Services.* Volume 55, July 2020, 102074.

Obilor, E. I., & Amadi, E. C. (2018). Test for Significance of Pearson's Correlation Coefficient (r). *Nternational Journal of Innovative Mathematics, Statistics & Energy Policies*, *6*(1), 11–23.

Parampreet Kaur, Jill Stoltzfus, Vikas Yellapu. (2018). Descriptive Statistics. *Journal of Academic Medicine, 4(1), 60-63*.

Puneet Kaur, Amandeep Dhir, Naveen Singh, Ganesh Sahu, Mohammad Almotairi. (2020). An innovation resistance theory perspective on mobile payment solutions. *Journal of Retailing and Consumer Services*, *55*(1), 2-10.

Ram, S., & Sheth, J. N. (1989). Consumer resistance to innovations: The marketing problem and its solutions. The Journal of Consumer Marketing, 6(2), 5-14.

*Reliability Analysis*. (n.d.). © Copyright IBM Corporation 1989, 2017.

Robert A. Peterson. (1994). A Meta-analysis of Cronbach's Coefficient Alpha. *Journal of Consumer Research, Volume 21, Issue 2, September 1994, Pages 381–391*.

Ruby. J & Madhu. K. (2019). Barriers to online shopping. *International Journal of Business Information Systems*. 30(1):31.

S. Ram. (1987). A Model of Innovation Resistance. *Advances in Consumer Research*, *14*, 208–212.

Saberi S., Abd Hapiz S., Mohamed Sopiee M.A. (n.d.). *Legal Aspects of E-Commerce in Malaysia.* @Azmilaw Newsletter.

Sarkar, S., Chauhan, S., &amp; Khare, A. (2020). A meta-analysis of antecedents and consequences of trust in Mobile Commerce. *International Journal of Information Management, 50, 286–301.*

Satwinderjit Singh, Izzal Asnira Zolkepli, Cheah Wen Kit. (2018). New Wave in Mobile Commerce Adoption via Mobile Applications in Malaysian Market: Investigating the Relationship Between Consumer Acceptance, Trust, and Self Efficacy. *International Journal of Interactive Mobile Technologies*, *12*(7), 112–128.

Shankar, A., Jebarajakirthy, C., & Ashaduzzaman, M. (2020). How do electronic word of mouth practices contribute to mobile banking adoption? Journal of Retailing and Consumer Services, 52, 101920.

Singh, S., Zolkepli, I. A., & Cheah, W. K. (2018). New wave in mobile commerce adoption via mobile applications in Malaysian market: Investigating the relationship between consumer acceptance, trust, and self-efficiency. *International Journal of Interactive Mobile Technologies (iJIM)*, *12*(7), 112.

Subhro Sarkara, Sumedha Chauhanb, Arpita Kharea. (2020). A meta-analysis of antecedents and consequences of trust in mobile commerce, *International Journal of Information Management.* Volume 50, February 2020, Pages 286-301.

Sujatha, R., y Sekkizhar, J. (2019). Determinants of M-Commerce Adoption in India Using Technology Acceptance Model Infused with Innovation Diffusion Theory. Journal of Management Research (09725814), 19(3), 193-204.

Taber, K. S. (2017). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, *48*(6), 1273–1296.

Verkijika, S. F. (2018). Factors influencing the adoption of mobile commerce applications in Cameroon. Telematics and Informatics, 35(6), 1665-1674.

W. T. Wang, W. M. Ou, and W. Y. Chen. (2018). The impact of inertia and user satisfaction on the continuance intentions to use mobile communication applications: A mobile service quality perspective, *Int. J. Inf. Manage.* vol. 44, no. November 2018, pp. 178–193, 2019.

Ward, S. J., & King, L. A. (2017). Work and the good life: How work contributes to meaning in life. *Research in Organizational Behavior*, *37*, 59–82.

Yeon, J., Park, I., & Lee, D. (2019). What creates trust and who gets loyalty in social commerce? *Journal of Retailing and Consumer Services*, *50*, 138–144.

Zameer, H., Wang, Y., Yasmeen, H. & Ahmed, W. (2019). Modeling the role of service quality, customer satisfaction and customer loyalty in building service brand equity, *International Journal of Asian Business Information Management.* 10(2), 55-72.

## APPENDICES

## APPENDIX A – DRAFT OF QUESTIONNAIRE

### SECTION A: DEMOGRAPHIC PROFILE

In this section, we would like you to fill in some of your personal details. Please tick your answer and your answer will be kept strictly confidential.

*Dalam bahagian ini, anda perlu mengisi beberapa butiran peribadi anda. Sila tandakan jawapan anda dan jawapan anda akan dirahsiakan.*

Question 1: Gender

*Soalan 1: Jantina*
- Female

  *Perempuan*
- Male

  *Lelaki*

Question 2: Age

*Soalan 2: Umur*
- 40-44

- 45-49

- 50-54

- 55-59

- 60-64

Question 3: Marital status

*Soalan 3: Status perkahwinan*
- Single
  *Bujang*
- Married
  *Berkahwin*
- Others
  *Lain-lain*

Question 4: Education level

*Soalan 4: Tahap pendidikan*
- High school
  *Sekolah menengah*
- Diploma

*Diploma*
- Degree

*Ijazah sarjana muda*
- Master and above
*Ijazah dan ke atas*
- Others
*Lain-lain*

Question 5: Race
*Soalan 5: Bangsa*
- Malay

*Melayu*
- Chinese
*Cina*
- Indian
*India*
- Others

*Lain-lain*

Question 6: Income level

*Soalan 6: Tahap pendapatan*
- RM 1,000 or below

*RM 1,000 dan ke bawah*
- RM 1,001 - RM 3,000

- RM 3,001 - RM 5,000

- Above RM 5,000

*Atas dari RM 5,000*

Question 7: Occupation

*Soalan 7: Pekerjaan*
- Unemployed

*Tidak bekerja*
- Self-employed

*Bekerja sendiri*
- Government

*Kerajaan*

- Private

*Swasta*

Question 8: Mobile commerce

*Soalan 8: Perdagangan mudah alih*
- User

  *Pengguna*
- Non-user

  *Bukan pengguna*

## SECTION B: MOBILE COMMERCE ADOPTION INTENTION

This section is seeking your opinion regarding the impacts of adoption intention of mobile commerce with the types of barriers given. Respondents are asked to indicate the extent to which you agreed or disagreed with each statement using 5 Likert scale [(1) = strongly disagree, (2) = disagree, (3) = neutral, (4) = agree and (5) = strongly agree] response framework. Please tick one number per line to include the extent to which you agree or disagree with the following statements.

*Bahagian ini meminta pendapat anda tentang kesan niat pakai perdagangan mudah alih dengan jenis halangan yang diberikan. Responden diminta menyatakan sejauh mana anda bersetuju atau tidak bersetuju dengan setiap pernyataan menggunakan 5 skala Likert [(1) = sangat tidak setuju, (2) = tidak setuju, (3) = neutral, (4) = setuju dan (5) = sangat setuju] rangka kerja respons. Sila tandakan satu nombor setiap baris untuk memasukkan sejauh mana anda bersetuju atau tidak bersetuju dengan kenyataan berikut.*

| No. | Question *Soalan* | Strongly disagree *sangat tidak setuju* | Disagree *tidak setuju* | Neutral *neutral* | Agree *setuju* | Strongly agree *sangat setuju* |
|---|---|---|---|---|---|---|
| | **Mobile Commerce Adoption Intention** *Niat pakai perdagangan mudah alih* | | | | | |
| 1 | I intend to use mobile commerce. *Saya berhasrat untuk menggunakan perdagangan mudah alih.* | 1 | 2 | 3 | 4 | 5 |
| 2 | I intend to use mobile commerce in future. *Saya berhasrat untuk menggunakan perdagangan mudah alih pada masa hadapan.* | 1 | 2 | 3 | 4 | 5 |

| 3 | I intend to use mobile commerce in order to increase the convenience. *Saya berhasrat untuk menggunakan perdagangan mudah alih untuk meningkatkan kemudahan.* | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 4 | I intend to learn how to use mobile commerce. *Saya berhasrat untuk belajar cara menggunakan perdagangan mudah alih.* | 1 | 2 | 3 | 4 | 5 |
| 5 | I intend to use mobile commerce more often. *Saya berhasrat untuk menggunakan perdagangan mudah alih dengan lebih kerap.* | 1 | 2 | 3 | 4 | 5 |
| 6 | I intend to recommend mobile commerce to my friends. *Saya bercadang untuk mengesyorkan perdagangan mudah alih kepada rakan saya.* | 1 | 2 | 3 | 4 | 5 |

## SECTION C: BARRIERS IN MOBILE COMMERCE ADOPTION INTENTION

This section is seeking your opinion regarding the importance of different types of barriers. You are asked to include the extent to which you agreed or disagreed with each statement using 5 Likert scale [(1) = strongly disagree, (2) = disagree, (3) = neutral, (4) = agree and (5) = strongly agree] response framework. Please tick one number per line to include the extent to which you agree or disagree with the following statements.

*Bahagian ini meminta pendapat anda tentang kepentingan pelbagai jenis halangan. Anda diminta untuk memasukkan sejauh mana anda bersetuju atau tidak bersetuju dengan setiap pernyataan menggunakan 5 skala Likert [(1) = sangat tidak setuju, (2) = tidak setuju, (3) = neutral, (4) = setuju dan (5) = sangat setuju] rangka kerja respons. Sila tandakan satu nombor setiap baris untuk memasukkan sejauh mana anda bersetuju atau tidak bersetuju dengan kenyataan berikut.*

| No. | Question<br>*Soalan* | Strongly disagree<br>*sangat tidak setuju* | Disagree<br>*tidak setuju* | Neutral<br>*neutral* | Agree<br>*setuju* | Strongly agree<br>*sangat setuju* |
|---|---|---|---|---|---|---|
| | **Usage**<br>*Penggunaan* | | | | | |
| 1 | In my opinion, mobile commerce services are difficult to use.<br>*Pada pendapat saya, perkhidmatan perdagangan mudah alih sukar digunakan.* | 1 | 2 | 3 | 4 | 5 |
| 2 | In my opinion, mobile commerce services are inconvenient to use.<br>*Pada pendapat saya, perkhidmatan perdagangan mudah alih tidak sesuai untuk digunakan.* | 1 | 2 | 3 | 4 | 5 |
| 3 | In my opinion, mobile commerce services are slow to use.<br>*Pada pendapat saya, perkhidmatan perdagangan mudah alih lambat untuk digunakan.* | 1 | 2 | 3 | 4 | 5 |
| 4 | In my opinion, progress in mobile commerce services is unclear. *Pada pendapat saya, kemajuan dalam perkhidmatan perdagangan mudah alih tidak jelas.* | 1 | 2 | 3 | 4 | 5 |
| | **Value**<br>*Nilai* | | | | | |

| 1 | Using mobile commerce services is uneconomical. *Menggunakan perkhidmatan perdagangan mudah alih adalah tidak ekonomik.* | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 2 | Using mobile commerce services does not offer any advantages when compared to other ways of handling financial matters. *Menggunakan perkhidmatan perdagangan mudah alih tidak menawarkan sebarang kelebihan jika* | 1 | 2 | 3 | 4 | 5 |

| | *dibandingkan dengan cara lain untuk mengendalikan hal kewangan.* | | | | | |
|---|---|---|---|---|---|---|
| 3 | Using mobile commerce services do not increase the ability to control financial matters. *Menggunakan perkhidmatan perdagangan mudah alih tidak meningkatkan keupayaan untuk mengawal hal kewangan.* | 1 | 2 | 3 | 4 | 5 |
| 4 | Using mobile commerce services do not eliminate the constraints of time and space when conducting transactions. *Menggunakan perkhidmatan perdagangan mudah alih tidak menghapuskan kekangan masa dan ruang semasa menjalankan transaksi.* | 1 | 2 | 3 | 4 | 5 |

| | **Trust** *Kepercayaan* | | | | | |
|---|---|---|---|---|---|---|
| 1 | Transaction via mobile commerce services is safe. *Transaksi melalui perkhidmatan perdagangan mudah alih adalah selamat.* | 1 | 2 | 3 | 4 | 5 |
| 2 | Privacy of mobile commerce services users is well protected. *Privasi pengguna perkhidmatan perdagangan mudah alih dilindungi dengan baik.* | 1 | 2 | 3 | 4 | 5 |
| 3 | Mobile commerce services transactions are reliable. *Urus niaga perkhidmatan perdagangan mudah alih boleh dipercayai.* | 1 | 2 | 3 | 4 | 5 |
| 4 | Security measures in mobile commerce services are adequate. *Langkah keselamatan dalam perkhidmatan perdagangan mudah alih adalah memadai.* | 1 | 2 | 3 | 4 | 5 |

# FACULTY OF ENTREPRENEURSHIP AND BUSINESS

## APPENDIX B – GANTT CHART

| Project (Activities) | Date | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16 - 22 Oct | 23 Oct - 5 Nov | 6 - 19 Nov | 20 - 26 Nov | 27 Nov - 3 Dis | 4 - 31 Dec | 1 - 21 Jan | 22 - 25 Jan |
| Group discussion | ▓ | | | | | | | |
| Confirmation tittle | ▓ | | | | | | | |
| Complete the assignment of chapter 1 | ▓ | ▓ | | | | | | |
| Submission of draft chapter 1 | | ▓ | | | | | | |
| Complete the assignment of chapter 2 & 3 | | ▓ | ▓ | ▓ | | | | |
| Submission of draft chapter 2 & 3 | | | | ▓ | | | | |
| Presentation of PPTA 1 | | | | | ▓ | | | |
| Collect study data | | | | | | ▓ | | |
| Complete the assignment for PPTA 2 | | | | | | | ▓ | |
| Submission for final draft | | | | | | | | ▓ |
| Final presentation of PPTA 2 | | | | | | | | ▓ |