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BARRIERS ON MOBILE PAYMENT NON-ADOPTION
INTENTION IN YANGON

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BARRIERS ON MOBILE PAYMENT NON-ADOPTION INTENTION IN YANGON

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ABSTRACT

This study aims to explore the barriers that affecting on mobile payment non-adoption intention and analyze the effect of barriers on mobile payment non-adoption intention. Primary data are collected from 385 non-mobile payment users in Yangon by google form. Simple random sampling method is used for collecting the data. The questionnaire was collected by making sure that the people are not using the mobile payment. Multiple regression is applied to analyse data. Five barriers (complexity, value, risk, inertia, and perceived cost) are analysed. Regression result indicates that four barriers except value barrier have the significant positive effect on non-mobile payment intention of people. Among those barriers, risk barrier is the most determinant barrier of non-mobile payment intention because respondents are afraid of losing their money. It is suggested that officials from banks should solve the risk barriers with the highest priority because it is the most influencing barrier for people. Regarding risk barrier, banks should provide security code for emergency case. Therefore, customers can temporarily close their accounts immediately. For complexity barrier, banks should offer demo application and people can try the mobile payment application without actual transactions. And banks should provide the training to customers how to use the mobile payment applications. Banks should give trainings relating to the technology aspects and customer service for their agents so that agents can deliver the service right since the first time. Regarding inertia barrier, banks should offer more incentives to retailers and wholesalers to accept mobile payment. Therefore, people can make the payment via mobile more easily. Finally, to reduce perceived cost, banks should pay attention to customers' convenience in the service process by arranging to withdrawal money from mobile accounts easily.

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CHAPTER (1)

INTRODUCTION

Mobile payment is embraced by different countries around the world in different ways. In 2000, a patent application was made that specifically defined "Mobile Payment System." A mobile payment is the act of processing payments while using a mobile device and an internet connection to buy products or services. Before becoming more prevalent in the United States and Canada, mobile payments first gained popularity in Asia and Europe. Nowadays, mobile payment has become more popular due to the explosive growth in the usage and market penetration of mobile devices. With the convenience of mobile devices, mobile payment platforms (MPPs) have emerged as the forerunner of financial technology (fintech), enabling immediate payment and settlement (Feng, 2021). With the rise of mobile payment and online shopping, the use of mobile payment has increased regarding to retail payment. Mobile payments have become a popular way to pay for goods and services in stores as well as between individuals.

Mobile payment systems still are far from reaching widespread adoption despite providing different benefits. In the finding of (Shaw, 2015), both industrialized and developing nations struggle with this issue of slow adoption and acceptance. Retail consumers' resistance behavior, according to (Hosseini, 2016), is largely to blame for the slow adoption of any good or service. Resistance is a natural response toward innovations because of the possibility of bringing changes in existing lifestyles and upsetting the status quo.

The use of electronic banking by consumers is hampered or prevented by a number of obstacles, either as a result of people delaying adoption or outright resisting it. This resistance may be brought on by a number of the examined innovation-related functional and psychological factors. According to Ram and Sheth (1989), when an invention is incompatible with a person's typical method of functioning, practices, or habits, a use barrier comprising complexity of use can result. Inertia, according to Woodside and Biemans (2005), denotes a person's satisfaction with the current state of affairs and lack of motivation to alter their conduct. The uncertainty and side effects connected with the acceptance of any innovation are referred to as the risk barrier.

As long as user's fund were stored in a bank account, the Central Bank of Myanmar (CBM) permitted mobile money providers to run their businesses in partnership with a licensed private bank as early as 2013. Today, Myanmar banks provide domestic branch-to-branch and bank-to-bank remittance services, as well as telegraphic transfers, international fund transfers using the SWIFT Code through corresponding banks, and international transfers using third-party remittance service providers like Moneygram or Western Union. Even while local banks' e-banking and mobile payment platforms have significantly improved domestic remittance services, many consumers, especially the elderly, still have reservations about using mobile payments. Presently, eight private banks in Myanmar presently provide mobile payment services, out of 31 banks in Myanmar (Kanbawza, Ayeyarwaddy, Asia Green Development, United Amara, Shwe Rural and Urban Development, Myanmar Citizen, Ayarwaddy Farmer Development, and First Private) (CBM, 2022).

During pandemic with lock down, purchasing patterns are changed and this has accelerated the usage of mobile payments and increased consumer familiarity with online shopping. The region of the fastest rate of mobile wallet growth is South-east Asia. (Rolfe, 2022) mentioned that the number of mobile wallet users is anticipated to increase from 141.1 million in 2020 to 439.7 million wallets in 2025 in Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

The adoption rate of mobile payments in Myanmar has increased from 1% in 2016 to 80% in 2019, making it an emerging industry (Nandar, 2022). Furthermore, numerous people used to handle their funds on their mobile devices rather than visiting the banks. In contrast to other nations, the proportion of mobile payment users is still very lower compared to others.

1.1 Rationale of the Study

Mobile payment is one of the essential elements of providing inexpensive financial services to those areas of traditional banking financial institutions that are underserved. The opportunity to offer practical payment services including person-to-person payments, top-ups, loan repayments, insurance payments, etc. exists for mobile payment providers. Efficiency is made possible by digital money for both customers and financial institutions.

Mobile payments are expanding quickly in Asia, driven by rising smartphone ownership and better internet accessibility. (Deloitte, 2020) proposed that China, Japan, India, Singapore, Indonesia, and Malaysia are the six major mobile payment users in Asia. Myanmar's financial sector is typically influenced by the cash economy, and most traditional bank customers encounter a number of problems, including long lines and a packed banking hall when withdrawing and depositing cash. Apart from 20 percent of the population, (Frontier, 2016) stated that Myanmar's financial services sector is the least developed in Southeast Asia, and the country prefers to use a cash-based economy.

People can use mobile payments to send and receive money, pay for items using QR codes, and get cash from approved agents. As a result, it lessens or completely removes the need for users to carry cash and credit cards, making it less likely that they will be misplaced or stolen. The adoption of mobile payments enhances transparency and lowers cash-related fraud, which is the cornerstone of growth and development. Mobile payment platforms in particular are essential for m-commerce (e.g., virtual marketplaces and online stores). Therefore, the ability of people to accept mobile payment via their cellphones is essential for growth and company success.

Myanmar's move to digital financial services was expedited by the COVID-19 epidemic. In Myanmar, more people are registering for mobile wallet services, especially during COVID-19. Additionally, banks have restricted cash since 2021 due to frequent account withdrawals. As a result, banks have capped the weekly withdrawal amount. To exchange cash from their accounts, people who want cash must pay an additional fee. Authorities promote the usage of cashless systems. It takes more time to count cash or wait for a chip card transaction. Another problem in Myanmar is fake currency. Mobile payment becomes essential for Myanmar under this circumstance. To become a cashless society, there are still some challenges to overcome.

Consequently, more research into the causes of Myanmar's resistance to adopting mobile commerce is important.

Numerous studies have been conducted with the goal of identifying the adoption obstacles to mobile commerce in specific nations so that service providers can create a solution. While Peng, Xu, and Liu (2011) identified the challenges and drivers in the acceptance of mobile commerce in China, Mahatanankoon and Ruiz (2007) explored

potential constraints that block the adoption of mobile commerce applications in the United States.

Similar to this, Rahman (2013) looked at the main problems that prevent the adoption of m-commerce (e-commerce via mobile phone or any wireless device) in developing countries and looked into ways to get beyond these obstacles. To understand the causes of this low adoption among Malaysia's Generation X, Moorthy et al. (2017) also looked at the resistance factors. Additionally, Javier, Victoria, and Yolanda (2017) did research on the obstacles to mobile banking adoption in Spain.

There has never been a research specifically on Myanmar, despite numerous attempts in the past to investigate the use of mobile pay in other nations. In order to increase the adoption rate of mobile commerce, local firms that plan to use it or already do so must be aware of the impediments to that use. The results of this study will help mobile payment service providers better understand all of the obstacles preventing consumers in Myanmar from adopting mobile commerce. As a result, this study helps local businesses come up with methods to get rid of resistance and maybe increase adoption rates while also advancing our understanding of individual resistance behavior.

In terms of the significant opportunity, mobile payments can capitalize on it to grow their user base and gain the chance to earn money through fees. Thus, in Myanmar, mobile money has a long way to go before realizing its full potential. Some people in Myanmar are resistant to new technologies, such as mobile payment, despite the country's ongoing change and development. It's critical to identify the elements or barriers that prevent consumers from using mobile payment in order to promote a cashless society and eliminate the use of physical currency. This study intends to look for barriers toward mobile payment non-adoption in Yangon, Myanmar to help both enterprises and individuals achieve faster transaction and efficient business activities in order to better understand why certain people in Myanmar oppose using mobile payments.

1.2 Objectives of the Study

The main objectives of the study are:

- 1) To identify the barriers of mobile payment non-adoption.
- 2) To analyze the effect of barriers on mobile payment non-adoption intention

1.3 Scope and Method of the Study

This study primarily focuses on the obstacles influencing on the mobile payment non adoption intention in Yangon. The mobile payment service provided by the banks in Myanmar is referred to as "mobile payment" in this study. Excluded are other mobile payment systems offered by telecommunications services.

For this research study, a descriptive research methodology is used. The use of both primary and secondary data is made. Unknown numbers of people may not use mobile payments. The Cochran sample size formula is used to determine sample size. On a 95% confidence interval, the computation was made. Based of the finding of (Cochran, 1963), 385 Yangon residents who do not utilize mobile payments are chosen as the sample population in accordance with the Cochran sampling formula. By using a simple random sampling method, 385 Yangon residents who do not utilize mobile payments were surveyed for primary data using structured questions. The structured questions survey use a 5-point Likert scale. Using multiple regression, the survey data is examined. Additionally, secondary data from sources including databases of reports and documents, textbooks, reference materials, websites, and earlier studies are applied.

1.4 Organization of the Study

The study is observed by five different chapters The study's motivation, objectives, scope, technique, and organizational structure are all presented in the first chapter of the study's introduction. Chapter Two discusses the theoretical underpinnings of the innovation resistance hypothesis, potential barriers to mobile payments, and behavioral intentions, as well as evaluations of prior research. The background of mobile payment systems in Myanmar is presented in Chapter 3. In chapter four, the analysis of the impact of impediments on the non-adoption of mobile payments is described. Chapter five summarizes the conclusions and related discussions, as well as any further research that is necessary.

CHAPTER (2)

THEORETICAL BACKGROUND

This chapter presents the mobile payment definition, history of mobile payment, and technology used. It is followed by related theories. In addition, this study presents barriers on mobile payment non-adoption intention. Finally, it states the previous studies and conceptual framework of the study.

2.1 Definition of Mobile Payment

Mobile payment (MP) can be defined as “payments for goods, services, and bills with a mobile device such as mobile phone etc. by taking advantage of wireless and other communication technologies” (Dahlberg et al., 2008). Mobile payment services are increasingly establishing within society, increasingly gain importance as a payment method, and are projected to foster and establish further (Statista, 2021). Looking at the definitions of mobile payment services by Statista (2021), they commonly emphasize the mobile device as a crucial key component for the transfer of monetary value, although there are some differences in the definition of the mobile device itself as some definitions include all mobile communication devices and others focus on the smartphone. Additionally, the significant difference between mobile payment services is the environment in which the payment process is executed. Mobile payment services are utilized for payments between peers (P2P) in the e-commerce field, as well as for in-store mobile point-of-sale (M-POS) payments (Schilke et al., 2010).

Mobile payments include payments that are effected or made possible through digital mobility technologies, via handheld devices, with or without the use of mobile telecommunications networks. These payments are digital financial transactions, although they may not necessarily be linked to financial institutions or banks (Cernev, 2010).

Mobile Payment System (MPS) consists of using mobile devices such as Mobile Phone, PDA, Wireless Tablet and Other devices connected to a Mobile Telecommunication Network, to initiate a transaction, such as a purchase request, and finalizing that transaction by authorizing payments for the exchange of goods and services. This makes MPS a form of electronic payment, with the exception that the transactions are carried out on the mobile

phone. Instead of paying using cash, cheques or credit/debit cards, a person can use his/her mobile phone to make payments.

2.1.1 History of Mobile Payment

In 1997, the mobile payment of services or goods was enabled for the first time in the world when Coca Cola in Helsinki came out with a beverage vending machine, where users could pay for the beverage with just an SMS message, making it the world's first instance of a mobile payment transaction.

Initially, the payments were limited to smaller amounts and they were often referred to as micropayments. The mobile payment systems based on SMS soon evolved into the world's first phone-based banking service launched by the Merita bank of Finland in 1997. By 1999, people started buying movie tickets from mobile devices. The advent of internet and smartphone gave birth to mobile payments through mobile finance solution. In 1999, PayPal was launched as a money transfer service.

The first patent exclusively defined "Mobile Payment System" was filed in 2000. In 2007, Vodafone launched one of the largest mobile payment systems in the world. It was based on USSD/SMS technology and offered various kinds of macro and micro payments. In 2011, Google launched Google Wallet, making it the first large company to provide a mobile wallet. With the wallet, consumers could make payments, earn loyalty points, and redeem coupons. In 2012, Apple introduced Passbook to be used for buying boarding passes and airline tickets. Apple Pay was launched in 2014, and Android Pay and Samsung Pay followed a year later. Apple Pay, Google Pay, and Samsung Pay are some of the most popular mobile payment solutions in the world. Their solutions are simple and compatible with many merchant card readers, credit cards, and banks.

According to the Statista report (2018) that about of mobile payments users in region wide, Asia/Pacific has the largest number of mobile payment users, followed by Africa and North America (Statista.com, 2018). Geographically, Asia Pacific (APAC) was the first one to adopt mobile payments, due to the existence of a large, unbanked, economy, followed by Europe and North America.

2.1.2 Mobile Payment Services

Mobile payment services refer the payments via premium SMS based transactional payments, direct mobile billing, and Contactless Near Field Communication (NFC). Mobile payment services are another method of making payment settlements for goods, services, and bills or invoices. Mobile payment services use mobile gadgets (such as a mobile phone, smart-phone, or Personal Digital Assistant) and electronic communication technologies (i.e. mobile telecommunications networks, or proximity technologies) (Teo et al., 2013). Kim et al. (2010) claim that mobile devices can be utilized in several payments, such as payments for digital content (e.g. ring tones, logos, news, music, or games), concert or flight tickets, parking fees, as well as bus, train and taxi fares.

Mobile payment services serve as the primary delivery platform for funds transfer or payments for services, goods or bills with mobile devices like smartphone or personal digital devices (PDA) and mobile internet (Molina-Castillo et al., 2016). Mobile payment services permit users to execute financial transactions over their mobile phones in a manner that is secure, simple and serviceable. It covers different types of payment like fares for taxis, buses or train, miscellaneous digital products such as apps, games, music etc., and tickets for movies and flight (Molina-Castillo et al., 2016). Instruments such as credit card, e-wallet or mobile wallet can be used to close financial transactions over mobile phones.

Mobile payment services enable users to complete their payments in a faster, safer and more convenience transactions at anywhere and anytime. As the usage of smart phone and mobile internet increases, mobile payment services grew rapidly. Both consumers and business are benefited from this mode of payment (Madan & Yadav, 2016).

From consumers' perspective, the benefits of mobile payment services includes convenience, purchases independent of location and time, person to person money transfer, ticketing and loyalty programmes (Mallat et al., 2009). In addition, the benefits of mobile payment services to retailers includes faster services, lower transaction costs and decrease in the number of cash transactions. All these benefits of mobile payment services makes it the next step of electronic payment services evolution and has tremendous potential to grow (Kim et al., 2010).

One of the biggest advantages of mobile payments is a financial convenience, which allows managing money anywhere and at any time. As they become more secure and

customer-oriented, mobile payments will play a relevant role in the future of finance and consumers (Silva, 2018).

2.2 Mobile Payment Technology

Financial technology (fintech) has become a technology that develops very fast and has very varied and growing services in each financial institution. Nowadays, the technologies of Mobile payment are One Time Ticket (OTT), Quick Response Code (QRC), Near Field Communication (NFC) and Secure Element (SE).

One Time Ticket (OTT) is an open one-time code sent to the receiver, where only the client or receiver is required to authenticate a transaction (Accumulate AB, 2004). Quick Response Code (QRC)- A two-dimensional bar code that downloads a web page to into the consumer's smartphone when photographed with a mobile tagging app in the phone (Swedbank AB, 2012). Near Field Communication (NFC) controller and antenna – it is a wireless technology that enables mobile devices to securely send the consumer's account information at the POS terminal at the merchant. The tags associated with consumer products which are kept at the billing counter are read through contactless technology (First Data, 2012). Secure elements (SE)- A secure smart card chip which stores and enable account information handling and it is completely different with the phone memory card. The information present in the secure element is protected by layers of security (First Data, 2012). Mobile application provides the users interface for the consumer to manage accounts and initiate payments from the wallet app in the mobile device (First Data, 2012). Encryption process is currently used for secure data transmission between bank and users but the problem is that this encryption process is not good enough for the protection of sensitive data between bank and customer. The reason is that security methods require more powerful computing and high storage capacity.

Despite the increasing demand for mobile payments, there is still hesitation among both businesses and end-users to fully adopt the technology due to security-related concerns. Today's cyber criminals and fraudsters employ increasingly sophisticated techniques to procure sensitive and personal data. Hence, these concerns are not misplaced. Mobile payments are associated with several security risks.

Security is the capability of the mobile payment system to protect user information from any suspicious sources during electronic transactions (Guo et al., 2012). Security,

privacy, and confidentiality of information are recurring topics in a variety of projects. When sensitive information stored in wireless handheld devices or computers is lost or stolen this could create a breach of privacy (Donnell & Jackson, 2007). Security and privacy subjects emerge through the system's ability to track people's location through personally collected data (Donnell & Jackson, 2007). Security is found to be a crucial factor for online customers (Eid, 2011).

The main challenges in mobile payment are to convince and educate customers on safety usage and the benefits of mobile banking technology. The relevant issues related to mobile payment technology are skills, safety of usage and confidentiality. There exists risk of failures of technological advancements that may cause insecurities to users. Customers reluctant to use mobile banking because they have fear of privacy breach across telecommunication network.

2.3 Related Theories for Mobile Payment Adoption and Non- Adoption

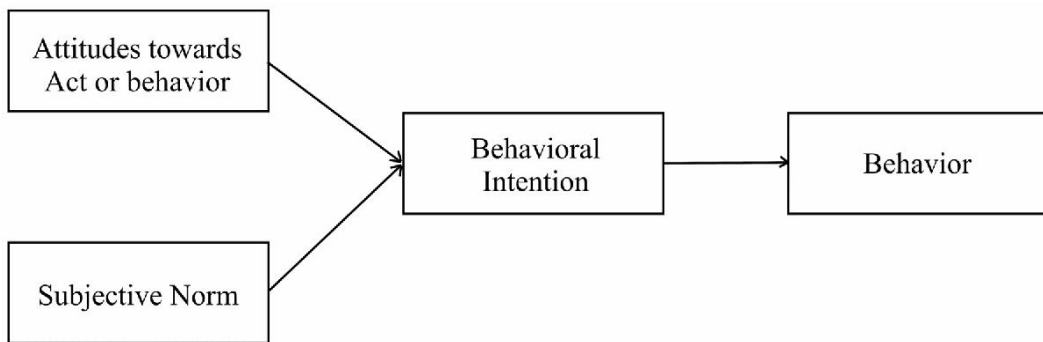
This section presents the theories for both adoption and non-adoption intention by reviewing existing dominant technology adoption models to identify suitable underlying theories and constructs conceptual framework.

2.3.1 Adoption Intention Theories

Several studies developed models and frameworks to explain and examine the factors affecting users' adoption of various new technologies, such as technology acceptance model (TAM), theory of reasoned action (TRA), extended technology acceptance model (TAM2) and unified theory of acceptance and use of technology (UTAUT).

Ajzen and Fischbein (1975) developed Theory of Reasoned Action (TRA), which is among the first theories on technology acceptance. The theory is used to predict behavioral intention. Figure (2.1) presents Theory of Reasoned Action (TRA) Model.

Figure (2.1) Theory of Reasoned Action (TRA) Model

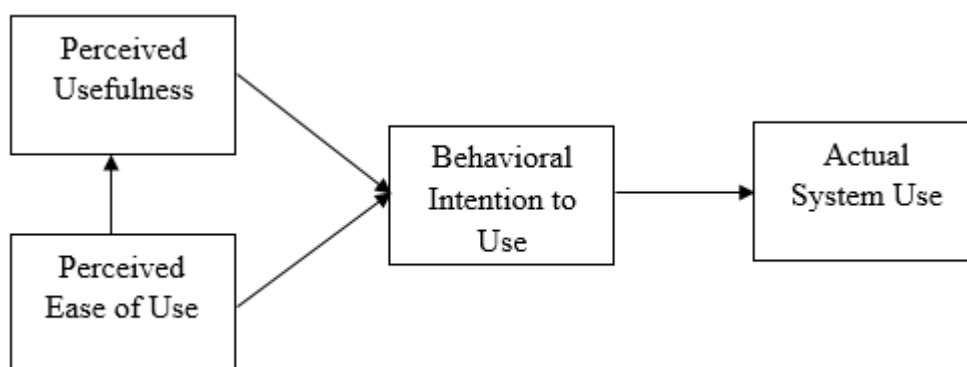


Source: Ajzen and Fischbein (1975)

The theory consists of three constructs: behavioral intention, attitude and subjective norms. According to Theory of Reasoned Action (Figure 2.1), a person's behavioral intention depends on the person's attitude about the behavior and subjective norms. It is assumed that if a person intends to do a behavior, then it is likely that he or she will do it (Sheppard et al., 1988).

Technology Acceptance Model (TAM) was based on the theory of reasoned action (Fishbein & Ajzen, 1975), which discussed how attitude impacted behavior. TAM was introduced by Davis (1986). The Technology Acceptance Model (TAM) by Davis, 1989 is one of the most widely accepted models of planned behavior to study the adoption of information technology. Figure (2.2) presents Technology Acceptance Model (TAM).

Figure (2.2) Technology Acceptance Model (TAM)



Source: Davis (1989)

The basic TAM model included and tested two specific beliefs: Perceived Usefulness (PU) and Perceived Ease of Use (PEU). Perceived Usefulness is defined as the potential user's subjective likelihood that the use of a certain system (e.g single platform

E-payment System) will improve his/her action and Perceived Ease of Use refers to the degree to which the potential user expects the target system to be effortless (Davis, 1989).

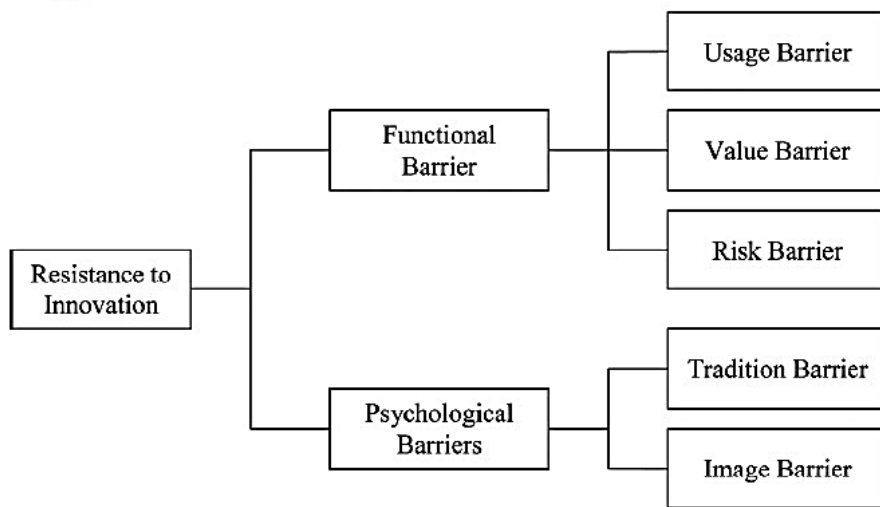
Venkatesh et al. (2003) developed a unified model that brings together alternative views on user and innovation acceptance – The unified theory of acceptance and use of technology (UTAUT). In UTAUT model, variables including performance expectations, ease-of-use expectations, social influences, and facilitating conditions are used to explore behavioral intentions and usage behaviors. Moreover, four possible moderating variables are proposed, namely, gender, age, experience and voluntary use, to explore usage behavior. UTAUT has a high degree of explanatory power for people’s intentions and behaviors in using technology.

2.3.2 Non-Adoption Related Theory

Innovation resistance is defined as the behavior toward the adoption and usage of any innovation that results in maintaining the status quo and resisting any deviances from the current beliefs (Ma and Lee, 2018). Innovation Resistance Theory (IRT) is used to find out the resistance of the customers.

The Innovation Resistance Theory (IRT) helps in understanding the resistance-oriented behavior of users. Innovation resistance theory investigates what influences consumer’s resistance to adopt technology-enabled new services or products. This theory consists of both psychological and functional barriers. Figure (2.3) presents the innovation resistance theory.

Figure (2.3) Innovation Resistance Theory



Source: Ram and Sheth (1989)

First, psychological barriers are often caused by conflict with consumers' prior beliefs, it including tradition barriers and image barriers. Moreover, the tradition barrier arises when an innovation is incompatible with an individual's existing values, norms, and past experience and may block the adoption of the innovation. On the other hand, the image barrier could be considered as the image of mobile banking services. Second, the functional barrier is an obstacle that has direct impacts on the reluctance of consumers, it can be divided into the usage barrier, value barrier and risk barriers that consumers may associate with a new product or service. Also, the usage barrier mainly implies the role of functional usability of an innovation. Furthermore, the value barrier defines as the perceived superiority of an innovation to the product or service it follows. Besides, the risk barrier relates in the form of different risk types such as fraud or product quality (McCarthy & Schurmann, 2015).

Usage barrier, value barrier and risk barrier are typical examples of functional barrier. Usage barrier is caused by compatibility with existing workflow, practices, or habits. Usage barrier is the most common reason for consumer resistance to an innovation. The second functional barrier to an innovation is value barrier caused by comparing with other products. This simply means that if an innovation does not offer a strong performance-to-price value, there is no incentive for the customers to adopt such innovation. The last functional barrier is risk barrier.

All innovations have a certain level of risk and the customers may try to postpone the adoption until they can learn more about it. The Innovation Resistance theory by Ram

and Sheth (1989) is the cornerstone of the theories used to develop the theoretical framework and the research base. Among many barriers, complexity barrier, value barrier, risk barrier, inertia barrier, and perceived cost barrier are studied in this study.

(i) Complexity Barrier

Complexity refers to the degree to which an innovation is perceived as difficult to understand and use. Considerable complexity demands more skills and efforts (to implement and use innovation) to increase its adoption and decrease the possibility of consumers' resistance (Tan & Teo 2000). Complexity and problems with usability have contributed to the low adoption of a variety of payment systems, including smart cards and mobile banking (Laukkanen & Lauronen, 2005). Greater complexity implies increased degree of difficulty in understanding the use of a given innovation. Therefore, complexity is assumed to be negatively associated to use intentions. Complexity encompasses the perceived level of difficulty an innovation is to use or understand by an individual within the social system (Pan et al, 2022).

(ii) Value Barrier

Value barriers refer to resistance resulting from inconsistency with the existing value system, specifically in the context of balancing between the cost of using the innovation and learning it in contrast with the offered benefits (Morar, 2013). The value barrier arises when consumers do not perceive m-payment to be superior than existing payment methods. One of the main issues is the question of the added value that m-payment provides over existing payment methods which proved to be mainly unclear for consumers (Deloitte 2016). It refers to the consumers' perception regarding the performance of an innovative product or service. It is a resistance towards the usage of products or services when they do not fulfil user's perception of performance-to-price value, in contrast with other substitutes. Daştan and Gürler (2016) stated that if m-payment is perceived to increase the flexibility and speed of payment for consumers, it will positively influence the adoption. The value barrier is one of the main reasons for resistance to the adoption of technological innovations, and perceived usefulness is a good reflection of that (Laukkanen, 2016). When a person sees that innovation has limited usefulness for him/her, it is more difficult for him/her to adopt it voluntarily.

(iii) Risk Barrier

With the changes innovations bring to consumers, also certain risks are associated with them as new products or services contain several uncertainties (Ram & Sheth 1989). Consumers being aware of risks are likely to resist innovations.

Following Ram and Sheth (1989), the risk barrier (RB) can be divided into four risk types. The first one is physical risk describing that an innovation can harm a person or a property. Transferred to technological innovations this might contain concerns about privacy, confidentiality and personal information. Secondly, economic risks are associated with the price paid for a new product or service which increases when the price is high (Ram & Sheth, 1989). The next type of risk is functional risk referred to the functionality of innovations and the fear that as they are relatively new, do not function properly. An additional aspect of functional risks concerning m-payments, is the fear of being hacked while conducting a payment at a POS as well as the fear of not having enough power on the smartphone (Hayashi, 2012). One example from mobile and internet banking is that consumers are especially concerned with problems relating to internet connections which could be relevant for m-payments. Finally, social risks describe the fear of being judged from other people due to the utilization of a new product or service. This last risk type was found to be less relevant in the technology context.

Risk barriers are the uncertainties which are inherent and entail innovations (Marett, et al., 2015). The risk barrier refers to the uncertainty and side effects associated with the adoption of any innovation. With regard to online activities, such risks are usually more related to financial aspects (Laukkanen, 2016).

(iv) Inertia Barrier

Inertia is defined as the attachment to and persistence of existing behavioral patterns (i.e., the status quo), even if there are better alternatives or incentives to change (Polites and Karahanna, 2012). In short, it reflects a consumer's unwillingness to leave the status quo regardless of the presence of any current or future alternatives. It refers to the consumer's attachment to and persistence in using cash, even with the availability of m-payment. Inertia is posited to enhance one's resistance to change regardless of their views on the alternatives. Therefore, it is proposed that consumers with high inertia are likely to continue using cash and be reluctant to use m-payment (Li, 2018).

Inertia is related to established patterns of use, and is a factor that determines, to a great extent, the rejection of innovations. People that are used to a certain banking channel will experience inertia and thus continue their existing habits, without considering the convenience offered by switching to another channel. Despite having the necessary skills to face change, such users do not want to undergo the inconvenience that it entails. In addition, Kuisma et al. (2007) found the routine of using traditional banking channels as one of the main reasons for not using mobile payment. However, to our knowledge, hardly any studies have dealt with the existence of gender differences in relation to inertia. Faqih (2016) pointed out that the inertia that people have in relation to the adoption of new technologies has been attributed to the anxiety that these people feel when trying to interact with those technologies.

(v) Perceived Cost Barrier

Gastal (2005) considered perceived cost as the cost related to the time and effort required to collect and analyze change and decision-making alternatives, as well as the development of the relationship with the new supplier or the new service. Perceived cost barrier is the degree to which consumer expects that using a particular technology will cost money. Perceived cost barrier refers to additional expenses that are incurred in moving from wired online payment services to mobile payment services (Lu et al., 2011).

It is also defined as an extent which one think that cost will be incurred if mobile payment is used which included payment for mobile devices, internet description fees, and transaction costs related to technology adoption (Yang et al., 2012). This refers to the initial, subscription, transaction and communication costs to which the consumer believes he or she will be submitted to in the future. It also includes the consumer's ability to buy a mobile device that is compatible with the mobile payment service. Perceived cost is defined as overall expenses associated with the adoption of particular technology platform (Pathirana & Azem, 2017).

2.4 Non-Adoption Intention

One of the earliest mentions of non-adoption of innovation was in 1976 by (Mittelstaedt et al., 1976). They identified three key factors as the causes of this non-adoption. First is symbolical rejection, wherein consumers use the information available to

decide that the product is not suitable for them; second is that although consumers accept the innovation symbolically, other factors make them unwilling to adopt the innovation; and the third is that although consumers symbolically adopt the innovation and are also willing to accept it, they still postpone the adoption. Thus, non-adoption may manifest as one of the three responses of consumers, namely, postponement, opposition, and rejection.

Non-adoption intention refers to the consequences of the sum of the variables that culminate into an intention demonstrating that the consumer is willing to perform certain actions (Joubert & Belle, 2013). Non-adoption of innovation, as discussed above, is actually the non-acceptance of innovation, which manifests as consumer resistance. There are two streams of thought in the existing literature. The first considers non-adoption and resistance as synonyms and describes them accordingly. The second stream considers resistance to be a subset of non-adoption (e.g., Patsiotis, Hughes, & Webber, 2013).

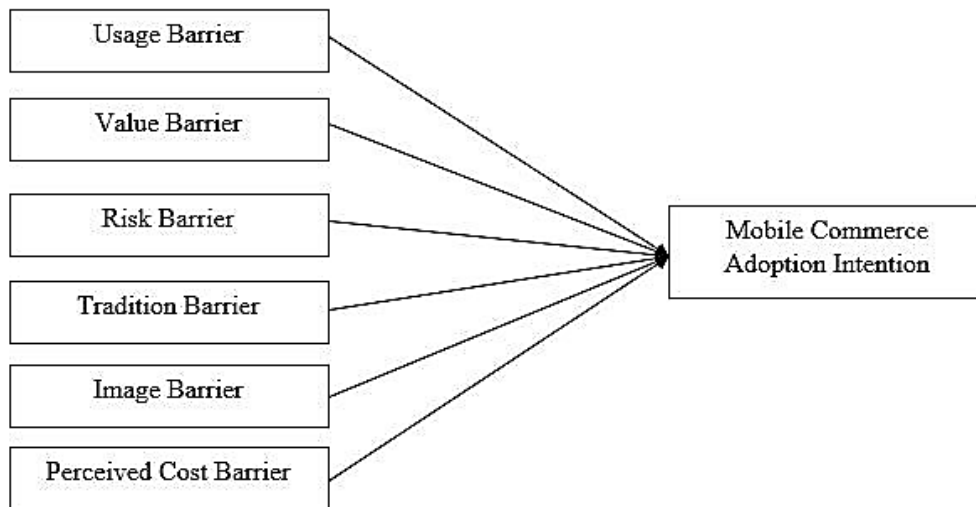
Chen et al. (2019) distinguished between non-adoption and resistance. In this context, non-adopters may be seen as consumers who do not adopt an innovation offered in the market and resisters may be seen as postponers who may be delaying the decision until a more suitable time (Laukkanen et al., 2008). In addition, resisters could also be opponents with a negative attitude toward the offered innovation or rejecters who have made a decision not to adopt the innovation (Laukkanen et al., 2008). Patsiotis et al. (2013) also endorsed the view that non-adoption is different from resistance, arguing that while the non-adoption of an innovation may be attributable to a high degree of resistance, there are other factors that may lead to this outcome. Such factors could include a lack of need, low awareness, or inertia (Patsiotis et al., 2013). In fact, as a subset of non-adoption (Patsiotis et al., 2013).

2.5 Previous Studies

Previous studies are useful for researchers because it gives the solid background of the related fields and give an idea for conceptual framework of the study. In this study, two previous studies are referred. The first one is the study of Moorthy et. al (2017) who focused the barriers of mobile commerce adoption intention, and the second one is the study of Javier, Victoria and Yolanda (2017) who focused functional barriers to the adoption of electronic banking.

Moorthy et. al (2017) did the research title named “Barriers of Mobile Commerce Adoption Intention: Perceptions of Generation X in Malaysia”. They intended to explore the resistance factors to understand the reasons for this low adoption among Generation X in Malaysia. Innovation Resistance Theory (IRT) and Valence Framework were employed to examine the barriers, including usage, value, risk, tradition, image, and perceived cost barriers. Figure (2.4) presents the conceptual framework of Moorthy et. al (2017).

Figure (2.4) Framework Showing Barriers of Mobile Commerce Adoption

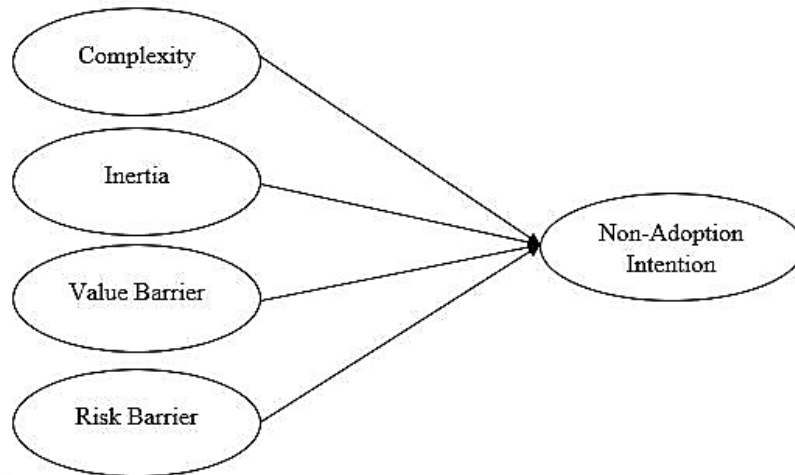


Source: Moorthy et.al (2017)

The findings obtained in this study indicated that usage barrier, value barrier, risk barrier, tradition barrier and image barrier significantly influence the mobile commerce adoption by Generation X in Malaysia. However, perceived cost barrier did not have an influence on the mobile commerce adoption. This study also concluded that tradition barrier is perceived to have the greatest impact to influence the adoption intention of mobile commerce among those barriers. This research also provided an extended Innovation Resistance Theory model with an additional construct, the perceived cost barrier, a negative valence factor, for the adoption intention of mobile commerce.

Similarly, Javier, Victoria and Yolanda (2017) did the research titled “Functional Barriers to the Adoption of Electronic Banking: The Moderating Effect of Gender”. This study analyzed the barriers that prevent its adoption, with the conceptual framework of the theory of resistance to innovation. In addition, it analyzed the moderating effect of gender on these barriers. Figure (2.5) presents the conceptual framework of Javier, Victoria and Yolanda (2017).

Figure (2.5) Relation between Functional Barriers and the Adoption of Electronic Banking



Source: Javier, Victoria and Yolanda (2017)

In the above study, 214 individuals from Natural person resident in Spain and non-user of internet or mobile banking were surveyed to collect the primary data. Using structural equations, through PLS and multi-group analysis, the results confirm consumer resistance to electronic banking adoption by functional barriers. It highlights the importance of the value barrier, being this aspect of particular relevance for men, while women are more affected by the complexity in the use of electronic banking.

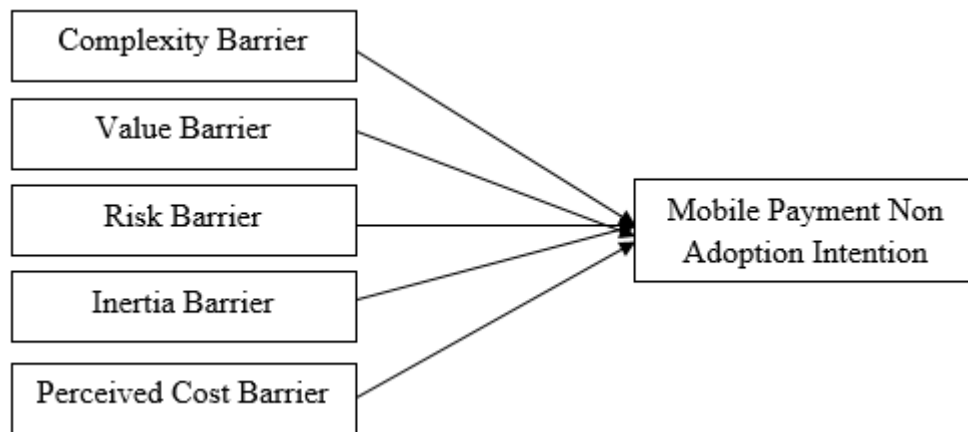
2.6 Conceptual Framework of the Study

Based on the previous literature reviews and conceptual frameworks, conceptual framework of the study is developed for this study. This study used Innovation Resistance Theory (IRT) as theoretical basis to measure the barriers that influence non-adoption of mobile payment.

Some people usually resist when they face new technology or products. The greater an innovation requires customers to deviate from traditions, the greater the resistance. Generally, Myanmar people especially senior people are afraid of technology innovation and they just want to do payment in traditional ways such as cash, and transactions at banks. In addition, they used to consider benefits and cost before doing final decision. According to the nature of Myanmar people and based on previous findings, there are five independent variables: complexity, value, risk, inertia, and perceived cost barrier.

According to the culture, Myanmar people usually insist the change since they need to put a lot of efforts to adapt the change. People are reluctant to use new technology or device if there are some complexities. They used to evaluate the innovative products based on different values. Moreover, Myanmar people are usually afraid of risks especially financial loss and used to take safe-side. People usually do not want to try new things if they are convenient with current system. Many Myanmar people used to consider cost of the new products and services before using them. Therefore, in this study, five independent barriers are analyzed to find out the non-adoption of mobile payment. Figure (2.6) presents the conceptual framework of the study.

Figure (2.6) Conceptual Framework of the Study



Source: Own Compilation (2022)

Moorthy et. al (2017) studied six barriers such as usage, value, risk, tradition, image, and perceived cost barriers while Javier, Victoria and Yolanda (2017) studied four barriers including complexity, inertia, value, and risk barrier. Concepts from IRT are adapted in this study, specifically complexity, value, and risk barriers, and inertia. This research also applies an extended Innovation Resistance Theory model by adding the perceived cost barrier construct for the non-adoption intention of mobile payment. Perceived cost barrier (PCB) as independent variable is added to examine the barriers towards non-adoption of mobile payment in Yangon.

Working definitions of the study for the conceptual framework taken from previous studies and own terms are presented as follows:

Complexity Barrier the degree to which a process or a product is difficult to understand and operate as a lack of knowledge or skill. For example, some people think that mobile payment is complicated because of VPN, transferring process etc.

Value Barrier occurs when customers feel performance-to-price value not matched in contrast with that of other substitutes. For example, mobile payment fees and lack of interoperability hinder people to use mobile payment.

Risk Barrier refers uncertainty regarding possible negative consequences of using a product or service (Mauricio et al., 2003). People are mainly afraid of losing their money kept in the mobile accounts by unauthorized access or wrong transaction etc. For example, people are afraid of losing their phones, and fraud etc.

Inertia Barrier occurs when people do not want to change or to remain unchanged even if there are better alternatives or incentives to change. They are afraid of risks and do not want to try new things as the regular system is good for them. For example, cash is still dominated in Myanmar and some people do not want to change it.

Perceived Cost Barrier refers additional expenses that incurred in transferring from traditional payment services to ubiquitous mobile payment options (Moorthy, 2017). For example, related fees such as phone price, internet fee, etc.

CHAPTER (3)

MOBILE PAYMENT SYSTEMS IN MYANMAR

The background of Myanmar's mobile financial services (MFS) accounts is presented in this chapter. Additionally, it discusses the various levels of mobile financial services as well as their restrictions and bank-led mobile payment services.

3.1 Background of Myanmar Mobile Payment System

Traditional banks are given the mobile banking license, which was issued in 2013. After that, businesses run under the bank's license. The Central Bank of Myanmar must issue the Mobile Financial Services Provider (MFSP) with a registration certificate before it may start offering MFS (CBM). The MFSP applicant must be a business that has been set up to run MFS. Banks are required to have minimum MMK 3 billion (or around \$2,566,000) in registered capital. (Lawplus, 2016) stated that a commercial bank may also request CBM's approval to run MFS, but only if its proposed MFS does not clash with any of the activities that are permitted by the Financial Institutions Law of Myanmar. The only currency that may be used to transact in MFS accounts is MMK. The Central Bank of Myanmar (CBM) lifted all restrictions on providing financial services in January 2017. Since then, the CBM has welcomed all foreign payment companies to the market in an effort to prevent local businesses from dominating the market (CBM, 2017).

The adoption rate of mobile payment systems in Myanmar, figured out by (Ei, 2022), has increased from 1% in 2016 to 80% in 2019, making it an expanding industry.

(CBM, 2012) proposed that the use of Mobile Pay/Mobile Wallet and payment systems that are not legally authorized by the Central Bank of Myanmar can result in significant losses owing to the lack of systematic oversight, the Central Bank of Myanmar said in a warning letter dated June 10, 2022.

Eight out of the 31 private banks have received approval from the Central Bank of Myanmar (CBM) to offer mobile payment services. These bank-led mobile solutions have so far been run by a restricted network of little Myanmar businesses, most of which are based in Yangon.

3.2 Mobile Financial Services (MFS)

In Myanmar, there are now three mobile financial services available. These are third-party mobile payment service, bank-led, and telco-led mobile payment services. Only bank-led mobile payment services are highlighted in this study.

3.2.1 Levels of Mobile Financial Services (MFS)

Mobile Financial Services (MFS) accounts are divided into three levels under the Central Bank of Myanmar's policy, with each level permitting a distinct set of transactions, as shown in Table (3.1).

Table (3.1) Levels of Mobile Financial Services (MFS)

Level	Account Holder	Cumulative Transaction/Day (Kyats)	Cumulative Transaction/Month (Kyats)	Maximum Balance (Kyats)
Level 1	Individual	50,000	1 Million	200,000
Level 2	Individual	200,000	5 Million	1 Million
Level 3	Registered Legal Entity	1 Million	50 Million	10 Million

Source: CBM, 2017

According to Table (3.2), three levels of MFS accounts exist: Levels 1 and 2 for individual accounts, and Level 3 for corporate registration. 50,000 kyats per day and 1 million kyats per month are the current limits for level 1 users. Level 3 users can transfer 1 million kyats per day and 50 million kyats per month, compared to 200,000 kyats per day and 5 million kyats per month for level 2 users. The maximum balance and cumulative transaction limitations are subject to periodic revision by the Central Bank.

Customers must first create an account, which takes just two minutes, in order to access the most basic mobile pay services (Level 1). It is necessary to provide general information, including your birth date, NRC, and mobile number, before setting up your account password. Regardless of whether people occupy a bank account or not, anyone with a smartphone and a mobile number from MPT, Telenor Myanmar, Ooredoo, or MyTel can register for mobile payment free of charge. After that, banks send customers their One Time Password (OTP) to use when logging into their mobile payment app.

Customers only require their Full Name, Gender, passport photo, scan of their NRC, Date of Birth, Father's Name, and Address in order to upgrade to Level 2. Within 24 hours, banks will confirm to customers after reviewing the Know Your Customer (KYC) papers.

3.2.2 Bank-led Application in Myanmar

Most residents of Myanmar's largest cities use bank-led applications with quick access to a number of banks. There are eight bank-led applications in Myanmar. Table (3.2) demonstrates bank name, mobile application name, launched date and authentication method.

Table (3.2) Bank-led Application in Myanmar

Sr.No	Bank	Mobile Payment	Launched Date	Authentication Method
1	Kanbawza Bank	KPay	August 2018	Two factors
2	Ayeyarwaddy Bank	AYA Pay	December 2019	Two factors
3	Asia Green Development Bank	One Pay	August 2019	Two factors
4	United Amara Bank	UAB Pay	October 2021	One factor
5	Shwe Rural and Urban Development Bank	MoMoney	November 2021	One factor
6	Myanmar Citizen Bank	Citizens Pay	June 2020	One factor
7	Ayarwaddy Farmer Development Bank	Aplus Pay	November 2021	One Factor
8	First Private Bank	MyKyat	-	At the moment, disable service

Source: myanmore.com, 2022

As shown in Table (3.2), only three banks offer two-factor authentications. The first one is the PIN code for logging in, and the second one is the One Time Password (OTP) used for transaction payments by consumers.

Furthermore, KBZ Bank was the first bank to switch from software token verification to biometric authentication using fingerprint or facial recognition and an automatic one-time password (KBZ, 2019). As a result, user security was greatly improved and the KBZPay and mobile banking apps' mobile experiences were improved.

3.3 Limitations and Services of Bank-led Mobile Payment

Myanmar's fintech system is gradually taking shape across the nation, despite the fact that it still lacks in many areas. A portable electronic device, like a tablet or phone, can be used to access mobile payments. A user-friendly mobile payment system that guarantees convenient payments and additional opportunities in daily life. Customers may use their fingertips from home to send money to their chosen recipients, pay their energy and internet bills, charge up their phones, and pay for online transactions.

Customers simply need to follow the on-screen instructions after downloading the mobile payment software for free from the Play Store or Apple Store. In order to install applications and educate new customers through the process, several private banks set established customer service sections at certain of their branches. It's crucial to improve the user-friendliness of the transaction process. The user interfaces of the programs do not now resemble one another or are standardized. A cash payment for a good or service is known as a mobile payment. There are, however, minimal restrictions. The program determines how the user interface and transaction processes are distinct. For those who lack sufficient digital knowledge, setting up a VPN and generating an OTP can be challenging. With their uneven digital knowledge, many people, particularly members of Generation X, are left behind. They are extremely traditional and do not desire change. These restrictions put some level of complexity in the way of mobile payment.

Interbank fund transfers are possible between two banks out of eight bank-led payments. Interbank transactions can only be completed via Onepay and UABpay. Users can easily transfer money to 24 different banks in Myanmar with only one click thanks to interbank transactions. You can top up MPU and Visa prepaid cards through your wallet without going to the branch in person. There are limited restrictions because consumers must use multiple mobile payment applications and cannot use just one. When money is taken out of the mobile wallet, a transaction fee is also taken. That charge, though, varies between institutions. Banks can only currently exchange a certain amount of cash from mobile payment accounts. People must therefore pay additional fees to unofficial agents in order to swap funds from their mobile accounts. Therefore, those restrictions act as a partial value barrier to mobile payment.

Since mobile payments employ encrypted technology, they are secure. The user's mobile device has a number of levels of security that prevent unauthorized users from

accessing his or her mobile payment account even if the user loses the device. Additionally, the user will require a passcode or biometric information in order to access the app and validate payments. One device at a time is the only one that can utilize the mobile pay application. On the other hand, consumers must notify the bank's call center to freeze the account promptly in order to initiate the account lockout or deactivation process in the event of loss or theft.

There are a few restrictions on the improper transaction complaint process, though. If it was the user's fault, banks would not be held accountable. Banks just assist in alerting the benefiting account of any erroneous transactions. It just depends on the beneficial account holder's good faith. A directive is issued by the central bank to regulate the banks and service companies that offer mobile payments. All financial service providers and mobile payment agents are required to install CCTVs for security reasons by the Central Bank. As a result, those restrictions provide some level of danger to mobile payment.

Agents and merchants can both use mobile wallet. In order for customers to scan and pay for the goods and services, retailers place QR codes throughout their establishments. A particularly pleasing feature for the merchants is that they can quickly view transactions in the wallet and transfer funds from the wallet to the bank account at the end of each day. The user can make the transaction without the burden of carrying cash thanks to secure QR Payment. Myanmar's economy is still largely focused on cash since people view currency as valuable property. There are now shortages of currency notes in Myanmar. For the sale of assets like real estate, homes, cars, and more, people seek cash. When customers pay using a mobile device, some sellers demand a higher price. As a result, there are some additional expenses including the purchase of a smart phone, internet fees, and cash exchange fees. These restrictions cause some inertia and perceived cost barriers in the minds of consumers.

In general, the aforementioned restrictions create challenges for the adoption of mobile payments in Myanmar, particularly when people lack sufficient digital literacy and prefer using cash.

CHAPTER (4)

ANALYSIS OF THE EFFECT OF BARRIERS ON MOBILE PAYMENT NON-ADOPTION INTENTION

This chapter has four sections. First sections present research design and second section presents the profile of the respondents. Third section includes the perceptions of barriers. Final section presents the regression results to identify the relationship between barriers and mobile payment non-adoption intention.

4.1 Research Design

This study aims to explore the barriers that affects mobile payment non-adoption intention and analyze the effect of barriers on mobile payment non-adoption intention. Descriptive research method is applied in study. Both primary data and secondary data are utilized. The population who are not using mobile payment is unknown. Sample size is calculated by using Cochran sample size formula. The Cochran formula is as per follow:

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where:

- e is the desired level of precision (i.e. the margin of error),
- p is the (estimate) proportion of the population which has the attribute in question,
- q is 1 - p.

The calculation was based on 50 % response distribution, 5 % precision level and 95 % confidence interval. The result of Cochran indicates 385 as sample population. Simple random sampling method is applied when collecting the survey.

Structured questionnaire is well designed with 5-point likert scale to identify the mobile payment non-adoption of users. Questionnaire mainly includes two sections: demographic section and barriers toward mobile payment application. Questionnaire is collected by using Google form. Google form link is shared at social media by requesting non- mobile payment users to fill the survey.

4.2 Profile of the Respondents

Primary data are collected from 385 non-mobile payment users by using structured questionnaire. The profile of the respondents is also important for the studies to identify characteristic of the people.

4.2.1 Demographic Data of the Respondents

Demographic data of the respondents can be important for mobile payment non-adoption since it can effect on the perceptions of respondents towards mobile payment application. Demographic data of the respondents includes gender, age, education background, marital status, occupation and income. Table (4.1) presents the profile of the 385 respondents. Details are shown in Appendix-B.

According to Table (4.1), most respondents are above 55 years old and they represent the majority of total respondents by 73.76 percent. The second largest group contains people from 46 to 55 years old and representing 23.12 percent of the respondents. From 36 to 45 years old people represent minority group among respondents. Therefore, it is found that majority of the non-mobile payment users are Generation X.

Among 385 respondents, majority of the respondents are graduate and they represent 72.47 percent of total respondents while 25.71 percent of respondents have post graduate education. Minority group contains undergraduate people who represent only 1.82 percent of total respondents. It is found that almost all of the respondents are educated people.

According to the survey, among 385 respondents, majority of the respondents are married and they represent the 87.53 percent of the respondents while others are single people. Therefore, it is found that most of the non-mobile payment users are married people.

Among 385 respondents, majority of the respondents are retired people who represent 66.49 percent of total respondents while 21.56 percent of respondents are government staff. Company staff and business owners represent 10.91 and 1.04 percent respectively. Therefore, it can be said that most of the respondents are retired people who rely on their pension or supports from their adult children.

Table (4.1) Demographic Data of the Respondents

Sr. No.	Item	Category	No. of Respondents	Percent
	Total		385	100
1	Gender	Male	136	35.32
		Female	249	64.68
2	Age (Years)	36-45	12	3.12
		46-55	89	23.12
		Above 55	284	73.76
3	Education Background	Undergraduate	7	1.82
		Graduate	279	72.47
		Post Graduate	99	25.71
4	Marital Status	Single	48	12.47
		Married	337	87.53
5	Occupation	Company Staff	42	10.91
		Government Staff	83	21.56
		Business Owner	4	1.04
		Retired	256	66.49
6	Income (Kyats)	100,000-200,000	246	63.90
		200,001-300,000	38	9.87
		300,001-500,000	47	12.21
		500,001-700,000	36	9.35
		700,001-1,000,000	14	3.64
		Above 1,000,000	4	1.04

Source: Survey Data, 2022

It is found that majority of the respondents earn from 100,000 to 200,000 MMK while second largest group receives from 300,001 to 500,000 MMK. It is found that minority group gets above 1,000,000 MMK. Therefore, it can be concluded that majority of the non-mobile payment users get not much income.

4.2.1 Mobile Experience of the Respondents

Mobile experience of the respondents can also be important for mobile payment adoption. It could affect the decision of the respondents towards mobile payment application. Table (4.2) presents the awareness of mobile payment system of the respondents.

Table (4.2) Mobile Experience of the Respondents

Sr. No.	Item	Category	No. of Respondents	Percent
	Total		385	100
1	Aware of Mobile Payment System	Yes	311	80.78
		No	74	19.22
2	Payment Method Used	Cash	326	84.68
		MPU Card	18	4.68
		At bank	9	2.34
		Friend's Mobile Payment	32	8.31
3	Reason for Not Using Mobile Payment	Security Issue	216	39.49
		Trust Issue	74	13.53
		I am not a mobile savvy	71	12.98
		Cost	186	34.00

Source: Survey Data, 2022

According to the Table (4.2), among 385 respondents, 80.78 percent of the respondents are aware of mobile payment systems. On the other hand, 19.22 percent of total respondents do not have awareness of mobile payment system. Therefore, it can be concluded majority of the non-mobile payment users have awareness of mobile payment system.

Among 385 respondents, 84.68 percent of the respondents use cash when they make payment or transaction while 8.31 percent of respondents use mobile payment of their friends. On the other hand, some respondents go to bank or pay with mpu card by 2.34 or 4.68 percent respectively. Therefore, it can be concluded majority of the non-mobile payment users use cash mainly to make payment or transaction.

It is found that 84.68 percent of the respondents use cash when they make payment or transaction while 8.31 percent of respondents use mobile payment of their friends. On the other hand, some respondents go to bank or pay with mpu card by 2.34 or 4.68 percent respectively. Therefore, it can be concluded majority of the non-mobile payment users use cash mainly to make payment or transaction.

4.3 Mobile Payment Barriers and Non-Adoption Intention

In this section, five mobile payment barriers (complexity, value, risk, inertia, and perceived cost) that can effect on the people and mobile payment non-adoption intention are analyzed. Structured questionnaire is collected by Google form from 385 non-mobile payment users. The perceptions of non-mobile payment users are identified by collecting structured questionnaire with 5-point likert scale.

4.3.1 Complexity Barrier

In this section, degree of difficulty to use mobile payment is identified by structured questionnaire from 385 non-mobile payment users. Perceptions of non-mobile payment users toward complexity of mobile payment services are presented in Table (4.3). Detail findings with education level are presented in Appendix-C.

Table (4.3) Complexity Barrier

Sr. No.	Complexity Barrier	Mean Score	Std. Dev
1.	Learning to operate mobile payment would be difficult for me.	3.24	0.92
2.	It would be hard to do what I want by mobile payment.	3.03	0.91
3.	I cannot successfully use the mobile payment without instruction manual.	3.10	1.06
4.	I find the user interface for mobile payment to be too complicated.	3.01	0.89
5.	Transaction process is difficult for me (VPN, password, pin number etc.)	3.22	1.11
	Overall Mean	3.12	

Source: Survey Data, 2022

According to Table (4.3), the highest mean score 3.24 indicates that respondents have difficulties to use mobile payment system as most of the respondents are above 55 years old and they cannot learn new technology fast. The second highest mean score 3.22 indicates that transaction process is difficult for respondents. They feel that it is very

complicated to memorize the processes to make payment via mobile payment transaction since they need to change VPN, and enter passwords for each transaction.

According to the overall mean score 3.12, most respondents feel that there is the moderate level of complexity barrier to use mobile payment system.

4.3.2 Value Barrier

In this section, the usefulness of mobile payment is compared to traditional banking. Perceptions of 385 non mobile payment users towards value barrier are collected by using structured questionnaire with 5-point likert scale and those data are presented in Table (4.4). Detail findings with education level are presented in Appendix-C.

Table (4.4) Value Barrier

Sr. No.	Value Barrier	Mean Score	Std. Dev
1.	Mobile payment would be less useful for managing my banking activities (interbank transaction, large amount etc.).	3.65	1.05
2.	Mobile payment would make it more difficulty to do my banking activities.	3.69	1.02
3.	Mobile payment would not accomplish my banking activities more quickly.	3.10	0.83
4.	Mobile payment does not offer any advantage compared to handling my payments in other ways.	3.50	0.99
5.	The use of mobile payment decreases my ability to control my financial matters by myself.	3.09	0.90
	Overall Mean	3.41	

Source: Survey Data, 2022

As shown in Table (4.4), most respondents state that mobile payment will lead to more difficulties for their banking activities and this factor gets highest mean score 3.69. Since those respondents used to hold cash, they need to exchange money from their mobile bank accounts by giving extra service fees. In addition, second highest mean score 3.65 indicates that mobile payment is less useful for people non-mobile payment users who want

to make interbank transactions. Currently only 2 mobile payment applications can do that kind of service. They believe that mobile payment does not offer more benefits compared to those of other ways.

According to the overall mean score 3.41, most respondents feel that there is the moderate level of value barrier to use mobile payment system.

4.3.3 Risk Barrier

This section analyses the fear for privacy issues, uncertainty and loss associated with the adoption of mobile payment system. Perceptions of non-mobile payment users toward risks of mobile payment services are presented in Table (4.5). Detail findings with education level are presented in Appendix-C.

Table (4.5) Risk Barrier

Sr. No.	Risk Barrier	Mean Score	Std. Dev
1.	I am afraid of phone lost or theft.	4.05	0.99
2.	I am afraid of unauthorized use.	3.98	1.00
3.	Mobile payment may threaten my privacy.	3.72	0.92
4.	I fear that the connection will be lost while I am using mobile payment.	3.90	1.07
5.	I fear that I may make wrong transactions.	3.94	0.93
	Overall Mean	3.92	

Source: Survey Data, 2022

As presented in Table (4.5), most respondents admit that they are afraid of phone lost or theft and this factor gets the highest mean score 4.05. Most of the respondents are above 55 years old and they often forget where they left the phones. They are afraid of criminals who are stealing people's phones and accessing users' bank accounts to steal their money. Hence, people are afraid of unauthorized use and this factor gets the second highest mean score 3.98. In addition, it is also found that people are afraid of wrong transactions because banks just inform beneficiaries about the wrong transactions and cannot take any responsibilities.

According to the overall mean score 3.92, most respondents feel that there is the moderate level of risk barrier to use mobile payment system.

4.3.4 Inertia Barrier

This section identifies the degree of a consumer’s unwillingness to leave the status quo by structured questionnaire with 5-point likert scale. Inertia levels of non-mobile payment users for mobile payment services are presented in Table (4.6). Detail findings with education level are presented in Appendix-C.

Table (4.6) Inertia Barrier

Sr. No.	Inertia Barrier	Mean Score	Std. Dev
1.	I prefer paying with cash.	3.79	0.79
2.	Cash gives me a better feeling of property.	3.48	0.67
3.	I am reluctant to try new things.	3.11	0.80
4.	Even if I have a problem, I will continue using cash.	3.10	0.94
5.	Switching to a new one will be very inconvenient for me.	3.21	1.05
	Overall Mean	3.34	

Source: Survey Data, 2022

As shown in Table (4.6), most non-mobile payment users prefer paying with cash and this factor gets the highest mean score 3.79. They are afraid of wrong transactions and loss of money. According to the second highest mean score 3.48, most respondents feel that cash in hand is the most valuable and sense of property because Myanmar has been crippled by a cash shortage and people have to pay extra charges to exchange money from their mobile accounts. Hence, most non-mobile payment users state that they will continue cash even if they have a problem.

According to the overall mean score 3.34, non-mobile payment users have some degree of inertia characteristic.

4.3.5 Perceived Cost Barrier

This sections identifies the worries of people regarding additional expenses to mobile payment services. Perceptions of non-mobile payment users toward Perceived cost barrier for mobile payment services are presented in Table (4.7). Detail findings with education level are presented in Appendix-C.

Table (4.7) Perceived Cost Barrier

Sr. No.	Perceived Cost Barrier	Mean Score	Std. Dev
1.	Mobile payment is high priced.	3.29	0.88
2.	Mobile payment services are not a good value for the money.	3.28	0.85
3.	Transaction costs via mobile phone are more expensive than using cash.	3.22	0.82
4.	Mobile payment expenses are burdens for me.	3.25	0.81
5.	Related fees (phone price, and internet fees, etc.) to perform mobile payment are expensive.	3.07	0.98
	Overall Mean	3.22	

Source: Survey Data, 2022

According to the highest mean score 3.29, most non mobile payment users perceive that mobile payment is high priced. They consider exchange rate for cash because some people including retails and street vendors still do not accept mobile payment. Based on second highest mean score 3.28, people think that mobile payment is not a good value of money because they have to incur extra costs such as phone price, internet fees, and transfer fees etc. Therefore, most people consider those costs as the burdens

According to the overall mean score 3.22, non-mobile payment users have some degree of perceived cost barrier

4.3.6 Mobile Payment Non-Adoption Intention

Non-adoption may manifest as one of the three responses of consumers, namely, postponement, opposition, and rejection. This section identifies the questions relating to scary, non-recommendation, preference of cash system, and intention to use mobile payment in the future etc. Intention of non-mobile payment users in the future is presented in Table (4.8).

Table (4.8) Mobile Payment Non-Adoption Intention

Sr. No.	Mobile Payment Non Adoption Intention	Mean Score	Std. Dev
1.	Using mobile payment systems will be somewhat scary to me.	3.76	0.88
2.	I would not recommend others to use mobile payment.	3.94	0.71
3.	I believe that cash transaction is the safest.	3.57	0.98
4.	I will not learn mobile payment transactions.	3.81	0.70
5.	I do not intend to use mobile payment in the future.	3.98	0.71
Overall Mean		3.81	

Source: Survey Data, 2022

According to the highest mean score 3.98, it is found that most respondents do not have intentions to use mobile payment in the future since they are afraid of risks associated with mobile payment. Based on second highest mean score 3.94, respondents do not want to recommend others to use mobile payment application since there are related costs such as internet cost, and transfer fees etc. Furthermore, non-mobile payment users will not learn how to use the application because they have inertia characteristic.

According to the overall mean score 3.81, non-mobile payment users have no intention to use mobile payment application in the future.

4.4 Analysis on the Effect of Barriers on Mobile Payment Non-Adoption Intention

To find out the relationship between barriers and mobile payment non-adoption intention, structured questionnaire from 385 non-mobile payment users is collected. To analyze the data, multiple regression is applied and the result is presented in Table (4.9).

Table (4.9) Effect of Barriers on Mobile Payment Non-Adoption Intention

Variable	Unstandardized Coefficients		Standardized Coefficients (Beta)	t	Sig	VIF
	B	Std Error				
(Constant)	2.440	.141		17.281	.000	
Complexity Barrier	.079*	.045	.124	1.744	.082	2.460
Value Barrier	.011	.039	.019	.271	.786	2.282
Risk Barrier	.196***	.033	.325	6.016	.000	1.422
Inertia Barrier	.162***	.052	.213	3.127	.002	2.259
Perceived Cost Barrier	.083*	.050	.127	1.681	.094	2.792
R Square	.220					
Adjusted R Square	.210					
F Value	21.377***					

Source: Survey Data, 2022

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

As described in Table (4.9), since the value of adjusted R square is 0.210, it can be concluded that this specified model can explain 21.0 % of variation of mobile payment non-adoption intention which is predicted by barriers. As overall significance of the model, F value is highly significant at 1 percent level, this model can be said valid. All the VIF values are less than 10. It shows that there is no multi-collinearity problem in this case. Among five barriers, all barriers are positively significant with mobile payment non-adoption intention except value barrier. Complexity and perceived cost barriers are significant with mobile payment non-adoption intention at 10 percent level while risk and inertia barriers are significant at 1 percent level.

Complexity barrier is significant with mobile payment non-adoption intention at 10 percent level. Non-mobile payment users think that mobile payment process is complex. If the complexity barrier is improved by 1 unit, it will also raise the mobile payment non-adoption intention by 0.079 unit.

Risk barrier is strongly significant with mobile payment non-adoption intention at 1 percent level. Non-mobile payment users are afraid of risks associated with mobile payment. If the risk barrier is improved by 1 unit, it will also raise the mobile payment non-adoption intention by 0.196 unit.

Inertia barrier is strongly significant with mobile payment non-adoption intention at 1 percent level. Most people are unwillingness to leave the status quo and do not want to try new things. If the inertia barrier is improved by 1 unit, it will also raise the mobile payment non-adoption intention by 0.162 unit.

Perceived cost barrier is significant with mobile payment non-adoption intention at 10 percent level. Non-mobile payment users perceive the burdens for using mobile payment application. If the perceived cost barrier is improved by 1 unit, it will also raise the mobile payment non-adoption intention by 0.083 units.

On the other hand, value barriers do not have a significant relationship with mobile payment non-adoption intention within 10 % range. Since most of the respondents are Generation X and have not tried mobile payment, they cannot exactly evaluate the performance or benefits of mobile payment application. According to the standardized coefficient (Beta) score, risk barrier has the largest value among three significant explanatory variables. It means that risk barrier is the most important factor for people who insist mobile payment application. People are afraid of unauthorized access to their mobile accounts if they lost their phones. Therefore, risk barrier is the most important influencing factor for non-mobile payment users.

CHAPTER (5)

CONCLUSION

This chapter presents the findings and discussions, suggestions and recommendations and need for further research. Based on the findings, this study makes some recommendations to improve mobile payment among people.

5.1 Findings and Discussions

This study is thoroughly conducted to explore the barriers that affecting on mobile payment non-adoption intention and analyze the effect of barriers on mobile payment non-adoption intention. Primary data are collected with structured questions from 385 non mobile payment users in Yangon. The structured questionnaire includes questions with 5 point Likert scales. Regarding demographic data of the respondents, majority of the non-mobile payment users are females who are late middle-aged people or Generation X. It is found that almost all of the respondents are educated retired people who are married and rely on their pensions ranged from 100,000 to 200,000 MMK. Although majority of the non-mobile payment users have awareness of mobile payment system, those people use cash mainly to make payment or transaction. They are afraid of doing mistakes and request others to make mobile payment if they have to transfer to other mobile payment accounts. Within a few years, the country leapfrogged into the digital age though young people have adopted faster than most parents so that the information gap between Generations has widened. Most of the respondents are Generation X who have limited digital literacy. They require assistance when they try and learn how to use a smartphone or tablet.

Regression result indicates that four barriers (complexity, risk, inertia, and perceived cost) have the significant positive effect on non-mobile payment intention of people. Among those barriers, risk barrier is the most significant because respondents are afraid of losing their money.

Regression result shows that complexity barrier has the positive effect on mobile payment non-adoption intention. Most non-mobile payment users think that the transaction process is difficult for respondents since they need to change vpn, and enter OTP code for each transaction. In addition, mobile payment applications processes are different from

each other. Currently only two banks provide interbank services and mobile payment users need to use different applications. Hence, it is complicated and inconvenient for people.

The study finds that risk barrier has the positive effect on mobile payment non-adoption intention. Most non-mobile payment users are afraid of unauthorized use of mobile payment accounts when their phone lost or theft. Moreover, they are afraid of wrong payment transactions because banks cannot take responsibility for those transactions and can just inform the beneficiary about wrong transactions. There is no clear policy or procedure for wrong transaction or fraud. Hence, respondents are afraid of risks associated with mobile payment.

The study also finds out that inertia barrier has the positive effect on mobile payment non-adoption intention. Most non-mobile payment users are unwillingness to leave the status quo and they do not want to try mobile payment application. Those people consider that cash in hand is the most valuable and sense of property since central bank instructs banks to squeeze some mobile bank accounts. Some mobile bank accounts are closed without evaluating thoroughly. Hence, respondents do not want to try mobile payment as they believe that cash transaction is most suitable for them.

The last significant barrier, perceived cost barrier, has the positive effect on mobile payment non-adoption intention. Most non-mobile payment users think that mobile payment is high priced. They also consider that mobile payment is not a good value of money because there can be extra costs such as phone price, internet fees, and transaction fees etc. Hence, respondents think that mobile payment is not worth of money.

Regarding mobile payment non-adoption intention, it is found that most respondents do not have intentions to use mobile payment in the future since they are afraid of risks associated with mobile payment. This is due to lack of digital skills, a lifetime of reliance on cash, and low digital access.

5.2 Suggestions and Recommendations

Based on the findings, officials especially from central bank and management of banks should focus to reduce barriers associated with mobile payment and motivate people to use mobile banking system in Myanmar since Myanmar has been crippled by a cash shortage.

Officials should pay major attention to retired people and company staff who are generation X. The elderly is very often the most reluctant to adopt new technologies, and cashless payments are no exception. Older people can have the most benefits from a cashless system, which requires less movement, less travel, and fewer personal safety risks.

Banks should emphasize this market segment by offering relevant products and services to persuade people to use mobile payment. Among potential barriers, officials should pay attention to only four barriers namely, complexity, risk, inertia, and perceived cost in order to reduce mobile payment non-adoption intention.

Officials from banks should pay highest priority to solve risk barriers because it is the most influencing barrier for people. Generation X are afraid of losing phones and unauthorized access because central bank and banks do not have clear policy for frauds and unauthorized access. To reduce risk barrier, private banks should provide security code for emergency case. Therefore, people can temporarily close their mobile accounts immediately. Banks should allow users to close their mobile accounts by themselves. Banks should setup 24/7 call center to solve the people's complaint and issues. Moreover, banks should carefully select the good software vendors to improve security and keep confidential information of people. Officials from Central Bank of Myanmar (CBM) and private banks should make policy for wrong transactions and issue the directives to prevent the people from fraud case. This will reduce risk barrier associated with mobile payment.

Regarding complexity barrier, banks should offer demo application that supports for learning the key feature of the mobile application. By that application, people can simulate for transferring money, checking the balance or paying for the bills etc. Hence, people can try the mobile payment application without actual transactions. Moreover, banks should arrange customer service sections where people can request how to use mobile payment. Banks should collaborate to offer similar user interface and transaction process so that users do not have to memorize different process for each mobile payment application. In addition, all banks should provide interbank service. Then, users do not have to use all mobile payment applications. Banks should provide the training to customers how to use the mobile payment applications. Banks should give trainings relating to the technology aspects and customer service for their agents so that agents can deliver the service right since the first time. This will reduce complexity barrier as people can learn how to use the application more easily and securely.

Concerning inertia barrier, officials from Government, Central Bank, and private banks should develop the mobile literacy of people by sharing the benefits and safety of new technology. Banks should also offer more incentives to retailers and wholesalers to accept mobile payment. Banks should deal with shops to motivate people by giving discounts or presents when they make the payment with mobile application. Finally, Central Bank of Myanmar (CBM) and banks should not ban the money in mobile accounts without strong reasons. Hence, people will feel safe about their money. Moreover, a central clearinghouse should be setup and it would improve fluidity across the mobile payment network. This will reduce inertia barrier and people will change their attitude to use the mobile payment.

For perceived cost barrier, banks should pay attention to customers' convenience in the service process. They should design the service to provide most convenience for customers in each of the service consumption stages. Banks should arrange to withdrawal money from mobile accounts easily. Moreover, Central Bank should make the clear policy for transaction fees based on transaction amount. Therefore, all banks will provide service with same fee. In addition, banks should try to develop the system which enables to transfer money to all mobile accounts including third party agents such as wave money. Banks should develop application compatible with almost all smart phones. Therefore, people do not need to buy new phones to use mobile payment application. The government should also subsidy transaction fees for mobile payments.

Finally, banks should always improve its service quality of mobile payment according to the needs and wants of the customers. In addition, it is suggested that banks should do service right first time for every customer. In order to promote the cashless society, officials from government and private banks should improve the digital knowledge of people by educating people via TV, YouTube channel or social media etc. Those programs should offer four curriculums: digital skill, digital ethics, digital culture, and digital security. By doing so, all the generations including generation X will have enough digital literacy and they will not be worried about barriers.

5.3 Need for Further Research

This thesis explored the barriers affecting on mobile payment non-adoption intention in Yangon. In this study, it focuses only on the bank-led mobile payment service.

It does not cover other mobile payment services such as telco-led mobile payment service and 3rd party mobile payment service in Myanmar.

There are many opportunities to improve this study. It is suggested that future studies should conduct other remaining mobile payment services not only in Yangon but also the whole country. Therefore, it will cover the whole mobile payment industry. Then, this study focuses only five barriers relating to mobile payment non-adoption intention. Hence, further study should pay attention to other remaining barriers to cover all possible barriers for mobile payment adoption in Myanmar.

REFERENCES

- CBM. (2017). Retrieved from GSI Repository: <https://repository.gsi.de/record/209729>
- CBM. (2022). *Central Bank warns public against illegal Mobile Pay/Mobile Wallet and payment services*. Retrieved from Eleven: <https://elevenmyanmar.com/news/central-bank-warns-public-against-illegal-mobile-paymobile-wallet-and-payment-services>
- Cernev, A. K. (2010). *Mobile banking in Brazil: critical events, trajectory and expected scenarios. (PhD thesis)*. Sao Paulo: Getulio Vargas Foundation.
- Chen, Q., Lu, Y., Gong, Y., & Tang, Q. (2019). Why do users resist service organization's brand mobile apps? The force of barriers versus cross-channel synergy. *International Journal of Information Management*, 47, 274-282.
- Cochran, W. G. (1963). *Sampling Techniques* (2nd ed.). New York: John Wiley and Sons, Inc.
- Dahlberg, T., Mallat, N., Ondrus, J., & Zmijewska, A. (2008). Past, present and future of mobile payments research: A literature review. *Journal of Commerce Research and Applications*, 7, 165–181.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-339.
- Deloitte. (2016). Retrieved from Mobile Payment – Kein Aufwärtstrend beim mobilen Bezahlen.
- Donnell, J., & Jackson, M. (2007). Solutions drawn from Australian case studies in mobile commerce. *International Conference on the Management of Mobile Business*, 20-25.
- Eid, M. I. (2011). Determinants of E-Commerce Customer Satisfaction, Trust, and Loyalty in Saudi Arabia. *Journal of Electronic Commerce Research*, 12, 78-93.
- Faqih, K. M. (2016). An empirical analysis of factors predicting the behavioral intention to adopt Internet shopping technology among non-shoppers in a developing country context: Does gender matter? *Journal of Retailing and Consumer Services*, 30, 140-164.

- Feng, H. (2021). Reserve Management in China: foreign reserves, renminbi internationalisation and beyond. In R. Pringle, & N. Carver, *HSBC Reserve Management Trends 2021*. London: Central Banking Publications.
- First Data*. (2012). Retrieved from PYMNTS : <https://www.pymnts.com/news/2012/first-data-releases-january-2012-spendtrend-20120209005972/>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitudes, intention and behavior: An introduction to theory and research Reading*. Boston: Addison-Wesley.
- Gastal, F. (2005). *A Influência da Satisfação e dos Custos de Mudança na Lealdade do Cliente (Dissertação de Mestrado)*. Porto Alegre: Programa de Pós-Graduação em Administração da Universidade Federal do Rio Grande do Sul.
- Grant, M. (2021). *Mobile Payment*. Retrieved from Investopedia: <https://www.investopedia.com/terms/m/mobile-payment.asp>
- Guo, X., Ling, K. C., & Liu, M. (2012). Evaluating factors influencing consumer satisfaction towards online shopping in China. *Asian Social Science*, 8(13), 40.
- Hayashi, F. (2012). Mobile Payments: What's in It for Consumers? *Economic Review*, 97(1), 35-66.
- Hosseini, M. H., Delaviz, M., & Derakhshide, H. (2016). Factors affecting consumer resistance to innovation in mobile phone industry. *International Journal of Asian Social Science*, 6(9), 497-509.
- Javier, B., Victoria, B., & Yolanda, P. (2017). Functional Barriers to The Adoption of Electronic Banking: The Moderating Effect of Gender. *Revista de Economía Aplicada*, 25(75), 87-107.
- Joubert, J., & Belle, J. P. (2013). The role of trust and risk in mobile commerce adoption within South Africa. *International Journal of Business, Humanities and Technology*, 3(2), 27-38.
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310-322.

- Kuisma, T., Laukkanen, T., & Hiltunen, M. (2007). Mapping the reasons for resistance to Internet banking: A means-end approach. *International Journal Of Information Management*, 27(2), 75-85.
- Laukkanen, T., & Lauronen, J. (2005). Consumer value creation in mobile banking services. *International Journal of Mobile Communications*, 3(4), 325-338.
- Laukkanen, P., Sinkkonen, S., & Laukkanen, T. (2008). Consumer resistance to internet banking: Postponers, opponents and rejectors. *International Journal of Bank Marketing*, 26(6), 440-455.
- Laukkanen, T., & Kiviniemi, V. (2010). The role of information in mobile banking resistance. *International Journal of Bank Marketing*, 28(5), 372–388.
- Laukkanen, T. (2016). Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the Internet and mobile banking. *Journal of Business Research*, 69(7), 2432-2439.
- Lawplus. (2016). Retrieved from Newsletter: <https://www.lawplusltd.com/download/Z004.0426.%20Myanmar%20Regulation%20on%20Mobile%20Financial%20Service%20s.pdf>
- Li, C. Y. (2018). Consumer behavior in switching between membership cards and mobile applications: the case of Starbucks. *Computers in Human Behavior*, 84, 171-184.
- Lu, Y., Yang, S., Chau, P. Y., & Cao, Y. (2011). Dynamics between the trust transfer process and intention to use mobile payment services: A cross-environment perspective. *Information & Management*, 48, 393-403.
- Ma, L., & Lee, C. S. (2018). Understanding the barriers to the use of MOOCs in a developing country: an innovation resistance perspective. *Journal of Educational Computing Research*, 1-20.
- Madan, K., & Yadav, R. (2016). Behavioural intention to adopt mobile wallet: a developing country perspective. *Journal of Indian Business Research*, 8(3), 227-244.
- Mahatanankoon, P., & Ruiz, J. (2007). Why won't consumers adopt m-commerce? An exploratory study. *Journal of Internet Commerce*, 6(4), 113-128.

- Mallat, N., Rossi, M., Tuunainen, V. K., & Öörni, A. (2009). The impact of use context on mobile services acceptance: The case of mobile ticketing. *Information & management*, 46(3), 190-195.
- Marett, K., Pearson, A. W., Pearson, R. A., & Bergiel, E. (2015). Using mobile devices in a high risk context: The role of risk and trust in an exploratory study in Afghanistan. *Technology in Society*, 41, 54-64.
- McCarthy, B., & Schurmann, A. (2015). Sustainable horticulture in North Queensland: Resistance to the adoption of Innovations? *Journal of New Business Ideas & Trends*, 13(2), 15-38 .
- Mittelstaedt, R. A., Grossbart, S. L., Curtis, W. W., & DeVere, S. P. (1976). Optimum Stimulation Level and the Adoption Decision Process. *Journal of Consumer Research*, 3(9), 84-94.
- Molina-Castillo, F., Guirao, A. R., López-Nicolás, C., & Bouwman, H. (2016). Analysis of mobile pre-payment (pay in advance) and post-payment (pay later) services. *International Journal of Mobile Communications*, 14(5), 499.
- Moorthy, K., Ling, C. S., Fatt, Y. W., Yee, C. M., Yin, E. K., Yee, K. S., & Wei, L. K. (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.
- Morar, D. D. (2013). *An overview of the consumer value literature – perceived value, desired value International Conference on Marketing – from Information to Decision*. Romania: Babes Bolyai University .
- Nandar, E. K. (2022). *The revolution of Myanmar fintech : Mobile payment applications*. Retrieved from MYANMORE: <https://www.myanmar.com/2022/06/the-future-of-myanmars-fintech/>
- Pathirana, P. A., & Azem, S. M. (2017). Factors Influencing the Use of Mobile Payments – A Conceptual Model. *National Information Technology Conference (NITC)*, 13(15), 67-74.

- Patsiotis, A. G., Hughes, T., & Webber, D. J. (2013). An examination of consumers' resistance to computer-based technologies. *Journal of Services Marketing*, 27(4), 294-311.
- Polites, G., & Karahanna, E. (2012). Shackled to the Status Quo The Inhibiting Effects of Incumbent System Habit, Switching Costs, and Inertia on New System Acceptance. *MIS Quarterly*, 36(1), 21.
- Rahman, M. M. (2013). Barriers to m-commerce adoption in developing countries- a qualitative study among the stakeholders of bangladesh. *The International Technology Management Review*, 3(2), 80-91.
- Ram, S., & Sheth, J. N. (1989). Consumer resistance to innovations: the marketing problem and its solutions. *Journal of Consumer Marketing*, 6(2), 5-14.
- Schilke, O., Wirtz, B. W., & Schierz, P. G. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. *Electronic commerce research and applications*, 9(3), 209-216.
- Shaw, N. (2015). The mediating role of perceived security: an empirical study of mobile wallet adoption in USA. In F. F. Nah, & C. H. Tan, *HCI in Business. HCIB 2015. Lecture Notes in Computer Science*. Berlin: Springer.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15, 325-343.
- Silva, K. (2018). *5 Reasons Why Your Business Should Use Mobile Payments*. Retrieved from The evolution of money looks like this: barter, coins, paper, plastic and now, phones.: <https://www.entrepreneur.com/business-news/5-reasons-why-your-business-should-use-mobile-payments/310726>
- Statista. (2021). *Cashless Society in Europe: A Winding Road*. Retrieved from A Statista DossierPlus on Europe's Transition from Cash Money to Cards and Mobile Payments.
- Tan, M., & Teo, T. (2000). Factors Influencing the Adoption of Internet Banking. *Journal of the Association for Information Systems*, 1(5), 22-38.
- Teo, A. C., Chea, C. M., Ooi, K. B., & Wong, J. C. (2013). *Why consumers resist mobile payment? A conceptual Model*. Bangkok: To Know Press.

- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- Woodside, A. G., & Biemans, W. G. (2005). Modeling innovation, manufacturing, diffusion and adoption/rejection processes. *Journal of Business & Industrial Marketing*, 20(7), 380-393.
- Yang, S., Lu, Y., Gupta, S., Cao, Y., & Zhang, R. (2012). Mobile payment services adoption across time: An empirical study of the effects of behavioral beliefs, social influences, and personal traits. *Computers in Human Behavior*, 28, 129-142.

APPENDIX A

QUESTIONNAIRE

Section A: General Information

1. Gender

- Male Female

2. What is your age?

- Under 25 26-35 36-45 46-55 Above 55

3. Education Background

- High School Undergraduate Graduate Post Graduate
 Others.....

4. Marital Status

- Single Married

5. Occupation

- Student Company staff Government Staff
 Business Owner Others

6. Income (Ks)

- 100,000 ~ 200,000 200,001 ~ 300,000 300,001 ~500,000
 500,001 ~ 700,000 700,001 ~ 100,000 Above 1,000,000

7. Are you aware of Mobile Payment System in Myanmar?

- Yes No

8. How do you usually make the payment or transaction?

- Cash Card At bank At store (Mobile Payment)
 Friend's mobile payment Others.....

9. Why would not you like to have or use a Mobile Payment System on your phone? (Can choose more than one answer)

- Trust issues Security issues Personal reasons
 I am not a mobile savvy Cost
 Other.....

Section B:

Please state level of your agreement on each statement by providing the most relevant number.

1= Strongly Disagree 2 = Disagree 3 = Neutral 4= Agree 5 = Strongly Agree

Complexity Barrier

No	Items	Scale				
		1	2	3	4	5
1.	Learning to operate mobile payment would be difficult for me.					
2.	It would be hard to do what I want by mobile payment.					
3.	I cannot successfully use the mobile payment without instruction manual.					
4.	I find the user interface for mobile payment to be too complicated.					
5.	Transaction process is difficult for me (VPN, password, pin number etc.)					

Value Barrier

No	Items	Scale				
		1	2	3	4	5
1.	Mobile payment would be less useful for managing my banking activities (interbank transaction, large amount etc.).					
2.	Mobile payment would make it more difficulty to do my banking activities.					
3.	Mobile payment would not accomplish my banking activities more quickly.					
4.	Mobile payment does not offer any advantage compared to handling my payments in other ways.					
5.	The use of mobile payment decreases my ability to control my financial matters by myself.					

Risk Barrier

No	Items	Scale				
		1	2	3	4	5
1.	I am afraid of phone lost or theft.					
2.	I am afraid of unauthorized use.					
3.	Mobile payment may threaten my privacy.					
4.	I fear that the connection will be lost while I am using mobile payment.					
5.	I fear that I may make wrong transactions.					

Inertia Barrier

No	Items	Scale				
		1	2	3	4	5
1.	I prefer paying with cash.					
2.	Cash gives me a better feeling of property.					
3.	I am reluctant to try new things.					
4.	Even if I have a problem, I will continue using cash.					
5.	Switching to a new one will be very inconvenient for me.					

Perceived Cost Barrier

No	Items	Scale				
		1	2	3	4	5
1.	Mobile payment is high priced.					
2.	Mobile payment services are not a good value for the money.					
3.	Transaction costs via mobile phone are more expensive than using cash.					
4.	Mobile payment expenses are burdens for me.					
5.	Related fees (phone price, and internet fees, etc.) to perform mobile payment are expensive.					

Mobile Payment Non - Adoption Intention

No	Items	Scale				
		1	2	3	4	5
1.	Using mobile payment systems will be somewhat scary to me.					
2.	I would not recommend others to use mobile payment.					
3.	I believe that cash transaction is the safest.					
4.	I will not learn mobile payment transactions.					
5.	I do not intend to use mobile payment in the future.					

Appendix B

Item	Category						Total
	Income						
	100,000 ~ 200,000	200,001 ~ 300,000	300,001 ~ 500,000	500,001 ~ 700,000	700,001 ~ 1,000,000	Above 1,000,000	
Gender							385
Male	84	12	16	16	6	2	136
Female	162	26	31	20	8	2	249
Total	246	38	47	36	14	4	385
Age (Year)							
36-45 Year	5	2	1	0	2	2	12
46-55 Year	62	10	6	7	3	1	89
>55 Year	179	26	40	29	9	1	284
Total	246	38	47	36	14	4	385
Education Background							
Undergraduate	5	0	0	0	1	1	7
Graduate	176	29	37	27	9	1	279
Post Graduate	65	9	10	9	4	2	99
Total	246	38	47	36	14	4	385
Marital Status							
Single	30	3	4	8	2	1	48
Married	216	35	43	28	12	3	337
Total	246	38	47	36	14	4	385
Occupation							
Company Staff	0	0	0	28	14	0	42
Government Staff	42	29	4	8	0	0	83
Business Owner	0	0	0	0	0	4	4
Retired	204	9	43	0	0	0	256
Total	246	38	47	36	14	4	385

Source: Survey Data, 2022

APPENDIX C

	Complexity Barrier						
	1	2	3	4	5	Total	
Education Level	Learning to operate mobile payment would be difficult for me.						
	Under graduate	0	2	3	2	0	7
	Graduate	2	59	108	85	25	279
	Post Graduate	0	27	34	28	10	99
	It would be hard to do what I want by mobile payment.	1	2	3	4	5	Total
	Under graduate	0	2	3	2	0	7
	Graduate	7	82	100	77	13	279
	Post Graduate	1	29	36	31	2	99
	I cannot successfully use the mobile payment without instruction manual.	1	2	3	4	5	Total
	Under graduate	0	1	2	4	0	7
	Graduate	27	40	97	100	15	279
	Post Graduate	14	14	33	34	4	99
	I find the user interface for mobile payment to be too complicated.	1	2	3	4	5	Total
	Under graduate	0	1	1	4	1	7
	Graduate	6	87	113	59	14	279
	Post Graduate	1	25	38	34	1	99
	Transaction process is difficult for me (VPN, password, pin number etc.)	1	2	3	4	5	Total
	Under graduate	0	2	1	3	1	7
	Graduate	18	73	50	110	28	279
	Post Graduate	6	20	25	41	7	99

Source: Survey Data, 2022

Education Level	Value Barrier						
	Mobile payment would be less useful for managing my banking activities (interbank transaction, large amount etc.).	1	2	3	4	5	Total
	Under graduate	1	1	1	4	0	7
	Graduate	10	33	66	108	62	279
	Post Graduate	4	6	25	43	21	99
	Mobile payment would make it more difficulty to do my banking activities.	1	2	3	4	5	Total
	Under graduate	1	1	1	3	1	7
	Graduate	10	27	68	113	61	279
	Post Graduate	4	4	24	46	21	99
	Mobile payment would not accomplish my banking activities more quickly.	1	2	3	4	5	Total
	Under graduate	1	1	3	2	0	7
	Graduate	6	67	123	76	7	279
	Post Graduate	1	17	33	48	0	99
	Mobile payment does not offer any advantage compared to handling my payments in other ways.	1	2	3	4	5	Total
	Under graduate	1	1	1	4	0	7
	Graduate	6	43	77	105	48	279
	Post Graduate	1	11	39	36	12	99
	The use of mobile payment decreases my ability to control my financial matters by myself.	1	2	3	4	5	Total
	Under graduate	0	3	1	3	0	7
	Graduate	4	88	75	105	7	279
Post Graduate	3	19	39	38	0	99	

Education Level	Risk Barrier						
	I am afraid of phone lost or theft.	1	2	3	4	5	Total
	Under graduate	0	0	1	5	1	7
	Graduate	16	11	43	123	86	279
	Post Graduate	6	5	18	36	34	99
	I am afraid of unauthorized use.	1	2	3	4	5	Total
	Under graduate	0	0	0	6	1	7
	Graduate	5	18	45	113	98	279
	Post Graduate	2	12	18	28	39	99
	Mobile payment may threaten my privacy.	1	2	3	4	5	Total
	Under graduate	1	0	4	2	7	1
	Graduate	36	69	122	52	279	36
	Post Graduate	10	22	44	23	99	10
	I fear that the connection will be lost while I am using mobile payment.	1	2	3	4	5	Total
	Under graduate	0	0	1	4	2	7
	Graduate	7	8	54	131	79	279
	Post Graduate	1	7	30	27	34	99
	I fear that I may make wrong transactions.	1	2	3	4	5	Total
	Under graduate	0	0	1	5	1	7
	Graduate	16	11	43	123	86	279
Post Graduate	6	5	18	36	34	99	

Education Level	Inertia Barrier						
	I prefer paying with cash.	1	2	3	4	5	Total
	Under graduate	0	0	3	2	2	7
	Graduate	0	0	118	103	58	279
	Post Graduate	0	2	41	31	25	99
	Cash gives me a better feeling of property.	1	2	3	4	5	Total
	Under graduate	0	0	2	5	0	7
	Graduate	1	18	108	145	7	279
	Post Graduate	0	9	40	49	1	99
	I am reluctant to try new things.	1	2	3	4	5	Total
	Under graduate	0	3	1	3	0	7
	Graduate	0	70	126	72	11	279
	Post Graduate	0	19	47	30	3	99
	Even if I have a problem, I will continue using cash.	1	2	3	4	5	Total
	Under graduate	0	2	2	3	0	7
	Graduate	4	90	73	99	13	279
	Post Graduate	3	25	32	38	1	99
	Switching to a new one will be very inconvenient for me.	1	2	3	4	5	Total
	Under graduate	1	1	2	2	1	7
	Graduate	17	64	74	98	26	279
Post Graduate	5	15	30	46	3	99	

		Perceived Cost Barrier					
Education Level	Mobile payment is high priced.	1	2	3	4	5	Total
	Under graduate	0	2	1	4	0	7
	Graduate	0	55	118	96	10	279
	Post Graduate	0	17	37	40	5	99
	Mobile payment services are not a good value for the money.	1	2	3	4	5	Total
	Under graduate	0	2	1	4	0	7
	Graduate	4	58	83	119	15	279
	Post Graduate	2	17	32	48	0	99
	Transaction costs via mobile phone are more expensive than using cash.	1	2	3	4	5	Total
	Under graduate	2	2	3	0	7	2
	Graduate	63	113	88	15	279	63
	Post Graduate	15	40	44	0	99	15
	Mobile payment expenses are burdens for me.	1	2	3	4	5	Total
	Under graduate	0	3	1	3	0	7
	Graduate	0	54	95	113	17	279
	Post Graduate	0	22	42	32	3	99
	Related fees (phone price, and internet fees, etc.) to perform mobile payment are expensive.	1	2	3	4	5	Total
	Under graduate	0	3	1	2	1	7
	Graduate	4	91	91	74	19	279
	Post Graduate	3	26	36	24	10	99

APPENDIX D

Effect of Barriers on Mobile Payment Non-Adoption Intention

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.469 ^a	.220	.210	.40181
a. Predictors: (Constant), Perceived Cost Barrier Mean, Risk Barrier Mean, Inertia Barrier Mean, Value Barrier Mean, Complexity Barrier Mean				

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.257	5	3.451	21.377	.000 ^b
	Residual	61.190	379	.161		
	Total	78.446	384			
a. Dependent Variable: Mobile Payment Non - Adoption Intention Mean						
b. Predictors: (Constant), Perceived Cost Barrier Mean, Risk Barrier Mean, Inertia Barrier Mean, Value Barrier Mean, Complexity Barrier Mean						

Coefficients^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.440	.141		17.281	.000		
	Complexity Barrier Mean	.079	.045	.124	1.744	.082	.407	2.460

Value Barrier Mean	.011	.039	.019	.271	.786	.438	2.282
Risk Barrier Mean	.196	.033	.325	6.016	.000	.703	1.422
Inertia Barrier Mean	.162	.052	.213	3.127	.002	.443	2.259
Perceived Cost Barrier Mean	.083	.050	.127	1.681	.094	.358	2.792
a. Dependent Variable: Mobile Payment Non - Adoption Intention Mean							