YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF APPLIED ECONOMICS
MASTER OF PUBLIC ADMINISTRATION PROGRAMME

A STUDY ON DIGITAL FINANCIAL INCLUSION IN MYANMAR

(CASE STUDY IN SHWEPUAKKAN TOWNSHIP, YANGON)

THU DEIN NAING TUN
MPA – 35 (20th BATCH)

MARCH, 2023

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A STUDY ON DIGITAL FINANCIAL INCLUSION IN MYANMAR (CASE STUDY IN SHWEPUAKKAN TOWNSHIP, YANGON)

A thesis submitted as a partial fulfillment towards the requirement for the degree of Master of Public Administration (MPA)

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March, 2023

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This is to certify that this thesis entitled "**A Study on Digital Financial Inclusion in Myanmar: A Case Study in ShwePaukKan Township, Yangon**" submitted as the requirements for the Degree of Master of Public Administration has been accepted by the Board of Examiners.

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ABSTRACT

Digital finance and financial inclusion have several benefits ranging from the users to the government. Primary data was collected with structured questionnaires from 100 respondents from ShwePaukKan Township, Yangon. The study found that digital financial services reduced the usage of informal services in transferring money across the country as well as improve the access to formal financial services in transaction and payment of money. The study also found that mobile money was able to provide the basic financial services such as payment and transferring money to non-banked respondents. The cyber security and risks associated to internet connectivity are highlighted as key risks among the digital financial service users. Ease to withdraw and transfer money via digital financial services improve the efficiency of formal financial service provision which in turn encourage people to access formal financial service.

ACKNOWLEDGEMENTS

First of all, I would like to express my profound gratitude to the Yangon University of Economics and Master of Public Administration Programme Committee for providing me with the opportunity to undertake this postgraduate course. I would like to express my sincerely thanks and deep appreciation to Professor Dr. Daw Tin Tin Htwe, Yangon University of Economics for their kind permission to undertake this thesis.

I wish to express my deepest appreciation to Professor Dr. Daw Su Su Myat, Porgramme Director of the MPA Programme, Head of Department of Applied Economics, Yangon University of Economics, for her enthusiastic and systematic guidance throughout the course and encouragement for completion of this study.

My heartfelt thanks and deep appreciation to my supervisor lecturer Daw Malar Thant, Department of Applied Economics who has given her kindness support, endless effort, helpfulness and also for her time and energy spent in reviewing, advising and correcting this paper throughout the development of this thesis. Without her supervision, this paper will have never been completed. In addition, I would like to thank all Professors, Associate Professors and Lecturers for imparting a great variety of knowledge during the study period of MPA program.

Moreover, my special thanks to the respondents for their time and willingness to participate to answer the survey questionnaire.

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INTRODUCTION

1.1 Rationale of the Study

Encouraging public access to formal financial service promotes economic growth as well as it leads to increase the level of citizen's welfare and social protection. Meanwhile, financial inclusion remains a major challenge with the existences of poverty and inequality across the world. Reducing the number of people who are being excluded from the formal financial system is still a major issue which need to be addressed.

Promoting the financial inclusion has various positive impacts on economic growth and development of the countries. Increased in financial inclusion means that individuals, households, and businesses are able to access the formal financial services which tend to increase saving and capital formation. Moreover, it will reduce the financial risks from informal sources. World Bank (2020) stated that financial inclusion is a key enabler in reducing poverty and boosting prosperity. This is because lack of access to financial products and services means limited access to credit. Lower access to credits caused lower productivity and saving which becomes the major reasons for not escaping from the vicious cycle of poverty. Various studies found that promoting financial inclusion plays as a major driving force for the country's economic growth by increasing total factor productivity and capital per worker. The recent study by Kim et al (2018) using GMM approach for a period 1990-2013 in a sample of 55 OIC countries demonstrated a positive relation between financial inclusion on growth for OIC countries. Further the results concluded that the high level of financial inclusion is an essential factor toward generating economic growth. In addition to that, the study on European Union and OECD countries (2004-2011) stated that financial inclusion has a positive effect growth, and the effect was stronger for high fragility countries than the countries of low fragility.

Many countries are trying to find out better approaches to reduce the financial exclusion and digital technology becomes one of the effective solutions. Nowadays, both banks and non-bank institutions have begun to offer digital financial services for financially excluded and underserved populations because of the prospect of reaching billions of new customers. Digital Financial Services (DFS) is known as the broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, allowances, and insurance. DFS also includes Mobile Financial Services (MFS), those are the use of a mobile phone to access financial services and execute financial transactions. Digital finance and financial inclusion have several benefits to financial service users, providers and governments and the economy such as increasing access to finance among poor individuals, reducing the cost of financial intermediation for banks and Fintech providers, and increasing aggregate expenditure for governments. Ideally, there are three key components of any digital financial service: a digital transactional platform, retail agents, and the use by customers and agents of a device – most commonly a mobile phone – to transact via the digital platform (CGAP, 2015). To use DFS, the DFS user will have an existing bank account which they own (or third-party accounts with approved permission to use them), and should have available funds (or overdraft) in their accounts to make cash payments (outflows) or to receive revenue (cash inflow) via digital platforms including mobile devices, personal computers or the internet.

Digital finance has the potential to provide affordable, convenient and secure banking service to poor individuals in developing countries (CGAP). Recent improvement in the accessibility and affordability of digital financial services around the world can help millions of poor customers move from cash-based transactions to formal digital financial transactions on secured digital platforms (CGAP). Moreover, digital finance promises to boost the gross domestic product (GDP) of digitalized economies by providing convenient access to diverse range of financial products and services (and credit facilities) for individuals as well as small, medium and large businesses, which can boost aggregate expenditure thereby improving GDP levels. Digital finance can also lead to greater economic stability and increased financial intermediation, both for customers and for the economy where they and their families reside. In addition, innovation in digital finance can have long-term positive effects for banking performance. Scott, Van Reenen, and Zachariadis (2017) examine the impact on bank performance of the adoption of SWIFT, a network-based technological infrastructure and set of standards for worldwide interbank telecommunication. They examine 6848 banks in 29 countries in Europe and the U.S. They find that the adoption of digital finance system has large effects on profitability in the long-term, and these profitability effects are greater for small banks than for large banks. Further, the results exhibit significant network effects on performance of financial sector. Digital finance also benefits governments by providing a platform to facilitate increase in aggregate expenditure which subsequently generates higher tax revenue arising from increase in the volume of financial transactions (Manyika et al., 2016). Six, digital finance has benefits to financial and monetary system regulators because full-scale digital finance adoption can significantly reduce the circulation of bad (or fake) money, etc. Other benefits of digital finance to customers includes greater control of customers' personal finance, quick financial decision making, and the ability to make and receive payments within seconds.

Digital technology is driving financial inclusion around the world, enabling countless people and businesses to join the global economy for the first time. Digital technologies offer a powerful way to boost financial access. Digitally financial services smooth the path of day-to-day living, help families and businesses plan for everything from long-term goals to unexpected. Due to the processes of DFS, millions of formerly excluded and underserved poor customers are moving from completely cash-based transactions to formal financial services such as payments, transfers, savings, credit, insurance, and even securities using a mobile phone or other digital technology to access these services.

According to UNCDF's only 6 % of adults use a formal financial institution, and only 30 % have access to a regulated financial service provider, such as a microfinance institution or credit union. Unregulated moneylenders and pawn shops are the most popular way for poorer Myanmar citizens to access credit. This is causing high financial risks, particularly for the most vulnerable population. Therefore, better financial inclusion improves resilience of vulnerable population by providing low-risk financial services. Promoting financial inclusion, particularly in rural and sub-urban areas, could improve the access to critical capital which in turn support productivity and growth of Myanmar. Hence, ensuring access to formal financial services plays a major role to address rural development and poverty alleviation.

Digital financial inclusion is one of the best solutions for Myanmar to reduce the gap in the financial sector. Since 2010, the population has quickly adopted smartphones, while the economy still operates almost completely cash-based transition. According to the data from Ministry Telecommunications, over 90 % of Myanmar adults had a cell phone by the end of 2016 (up from just 7 percent in 2012), with smartphone penetration approaching 80 % of all mobile phones. the mobile phone network rate reached 95 percent in 2019, from less than 10 percent in 2014.With higher rate of mobile phone penetration over decades, Encouraging the development of mobile money will promote financial inclusion in Myanmar. Through mobile money channel, microfinance providers can increase their services and products to substantially increase financial inclusion in Myanmar.

Although cash is still a king for Myanmar, the country has experienced serious technology-led changes in its banking and finance sector over the years. The behavior of population is changing overtime with the development of digital based innovation in the financial sector. Instead of keeping and saving cash in homes, people are gently changing to save their moneys in bank and using credit cards, such as ATM cards and Myanmar Payment Union (MPU) cards. The emergence of mobile banking apps and expanding in the network of mobile financial services, widespread use of mobile banking and mobile money has been accelerated. Mobile FinTech's are taking positioning as comfortable, affordable, agile and a secure payment platform in people's daily lives, resulting the usage of mobile money grows phenomenally. Consequently, forr people who send and receive money, usage of mobile money has increased from 0.8% in 2016 to 80% in 2019.

The Central bank provide a regulation on " Mobile Financial Services" (MFS) to make a secure mobile financial services regulatory environment in Myanmar at March 2016.Then, MFS license to support electronic money transfer and other tech-based financial services within the country can apply for mobile network operators and non-bank financial institutions. The advances in technology are changing the way people access and use financial products and fintech companies and corporations in Myanmar are cashing in on the country's smartphone boom and Internet access to bring low priced, user-friendly, digital financial products to the people. There are two modes for mobile financial services in Myanmar: bank-led mobile financial services and mobile financial service providers, total of five major bank-led mobile banking services and five mobile financial service providers. Adoption of digital platform in financial sector promote the financial inclusion in Myanmar. Under Myanmar Financial Inclusion Roadmap 2014-2020, a combination of expanding bank branch and ATM networks, growing mobile banking and licensing more MFIs constituted a significant progress in financial inclusion. The roadmap outlined a target of raising the formal financial inclusion rate which stood at 30% in 2014 to 40% by 2020, and this figure had already reached 48% by 2018 while the number of adults with at least one financial product from 6% in 2014 to 15% by 2020 was also exceeded, reaching a promising 18% in 2018. Moreover, the number of people who used informal money lenders declined to 4.2 million in 2018 from 5.9 million in 2014.

However, digital financial inclusion is still at a nascent stage and many challenges need to be addressed. To identify the major challenges for sustaining the digital financial services across the country, studies and research are needed. Therefore, this study aims to fill the knowledge gap and to provide the result-based solution for sustainable development of digital financial inclusion in Myanmar.

1.2 Objectives of the Study

The objectives of the study are as follow.

(1) To study the development of digital financial inclusion in Myanmar

(2) To identify the usage, opportunities, and challenges of digital financial services in Shwe Paukkan Township

1.3 Method of Study

The study is undertaken by using descriptive method based on primary data collected in Shwepaukkann township, Yangon. Total sample of 100 respondents had been collected. The secondary data are collected from related journal papers, publicly available data and sources form international organization and the government.

1.4 Scope and Limitations of the Study

The study mainly focuses on improvement, challenges and further expectations related with digital financial services in Shwepaukkann township, Yangon. Due to its limited sample, results of the study are not representing the whole country. The data collected during October-November 2022 so that the results only covered this specific period time and not reflected the further development.

1.5 Organization of the Study

This study is composed of five chapters. The first chapter is introduction of the study which includes five subtitles. The second chapter represents the Literature reviews of the study, and the third chapter outlines current status of digital financial inclusion in Myanmar. The chapter four explores challenges and opportunities of digital financial inclusion through survey data and analysis. The final chapter provides the conclusion and policy recommendation based on the outcomes of the study.

CHAPTER 2
LITERATURE REVIEW

2.1 Definition of Digital Financial Inclusion

"Digital financial inclusion" can be defined as digital access to and use of formal financial services by excluded and underserved populations. Such services should be suited to the customers' needs and delivered responsibly, at a cost both affordable to customers and sustainable for providers.

Digital financial inclusion is not confined to spreading digital services to a larger population; it also includes offering quality and diversified financial services at a reasonable cost. At the macro level, the benefits of financial inclusion and electronic payment are to enhance financial inclusion, enhance the stability of the financial system, enhance economic development, increase employment rates, increase the financial access for enterprises, especially SMEs, increase transparency to fight money laundering and the financing of terrorism, and reduce poverty levels through cutting down the costs of financial transaction. Eventually, developing an advanced electronic payment system is crucial for maintaining the strength and efficiency of the sustainable national payment system, using the advantages mentioned above to attain sustainable, comprehensive development and contribute to supporting Gross Domestic Product (GDP) growth.

In today's globally connected marketplace, there is a very high penetration rate regarding smartphones and social media due to rapid technology advancements. This is a great opportunity for many countries worldwide to promote their economic growth and support financial stability by adopting financial inclusion through mobile payment methods. Accordingly, financial inclusion can be defined as the state wherein people can access various financial products and services (payment transactions, savings, credit, remittances, and insurance), which are delivered appropriately, reliably, and sustainably at a reasonable cost that meets their needs. Eventually, financial inclusion strives to remove the barriers that exclude individuals from participating in the financial sector services and using these services to improve their living standards.

According to the World Bank's study on Measuring Financial Inclusion and the Fintech Revolution, digital financial services (DFS) can help people manage financial risk by making it easier for them to collect money from distant friends and relatives when times are tough, and that DFS can significantly lower the cost of receiving payments.

2.2 Types of Digital Financial Services (DFS)

Digital financial services can be divided into four broad groupings based on the party holding the contractual relationship with the customer:

(i) a full-service bank offering a "basic" or "simplified" transactional account for payments, transfers, and value storage via mobile device or payment card plus point-of-sale (POS) terminal;

(ii) a limited-service niche bank offering such an account via mobile device or payment card plus POS terminal;

(iii) a mobile network operator (MNO) e-money issuer; and

(iv) a nonbank non-MNO e-money issuer. All four models function via three components: a digital transactional platform, an agent network, and the customer's access device. With these components in place, payments and transfers, as well as credit, savings, insurance, and even securities, can be offered digitally to excluded and underserved customers.

2.3 Importance of Digital Financial Services in Financial Inclusion among Countries

Digital financial services (DFS) are important for financial inclusion because they can help to reach unbanked and underbanked populations. These services, which include mobile banking, digital payments, and online lending, can provide access to financial services for people who may not have access to traditional brick-and-mortar financial institutions.

To date, 1.7 billion people around the globe remain unbanked and 56% of the total unbanked adults are women. Compare to men, adoption of digital payment and internet banking is lower for women. In addition, women are more likely to be financially excluded especially those working in informal sector e.g., homebased worker. Besides that, women who possess higher level of trust in banking system increases their bank account ownership. Interestingly, past study revealed that firm financial performance is much better if it is led by women.

Developing countries are facing issues such as low awareness on cashless policy. As such, leaders of developing countries should include financial innovations into national policy to help alleviating poverty and achieve Sustainable Development Goals (SDGs). For example: people should be encouraged to adopt cashless payment which provides safer payment mode while financial institutions should invest in FinTech services which would yield higher returns. Increasing reliance on informal source of financing in developing and developed countries is attributed by public mistrust in financial institutions. In addition, a person's reliance on informal source of financing increases when he or she records low credit rating which further leads to refusal in dealing with banks. Since financial inclusion is a lubricant for the entire economic system, it is suggested that in developing countries, bank should extend and promotes updated financial products and services especially to people in rural area and SMEs. Financial literacy, infrastructure, financial tools which enhanced security protection, and local government support are crucial for developing country like China to ensure its nation to be financially included.

Analysis on Digital Finance for Financial Inclusion and Inclusive Growth by Md. Nur Alam Siddik and Sajal Kabiraj (2020) states that DFS improve access to formal financial services and promote inclusive growth. Businesses are being transformed in fundamental ways as a result of the data revolution and societal drivers of change. The new era inaugurated by digital 2.0 technologies created a discontinuity and a fundamental shift in our ideas of business and society. Fundamental concepts that constituted the definitional parameters of business are undergoing a re-definition process. Technological revolutions brought to us increase in processing power, bandwidth, user-friendly interfaces with technology, the ‘internet of things’, to list a few benefits. Also, we live in a society that loves to consume radical change. These drivers together have transformed our situated existence in the human society. For businesses, these changes mean the blurring of industry boundaries, modular business architectures, distributed innovation micro-structures, ‘just-in-time’ definitions of business performance, among others.

According to Digital Financial Inclusion and Farmers’ Vulnerability to Poverty: Evidence from Rural China by Xue Wang and Gaungw (2020). Access to finance is often cited as a key factor for sustainable poverty alleviation, but expanding access to the poor remains an important challenge for financial institutions. Much hope has, therefore, been placed in the transformative power of digital financial inclusion. However, evidence on the relationship between digital financial inclusion and poverty is limited.

Digital Financial Inclusion in India by Gaurav Agrawal and Pooja Jain (2019) stated that adoption of mobile financial services lead to increases accessibility towards financial products among rural people as well improve standards of living and overall development of the nation. Financial inclusion is a multidimensional approach. With technology intervention in financial inclusion, electronic banking activity in rural India leads to increased use of financial services and better living standards. In the rising market, many people using mobile phones still are not able to access banking products and financial services. This indicates a huge untouched market for commercial banks. In India, mobile banking services are still in the early stages of development. Thus, the main objective of the chapter is to understand the factors that would act as drivers towards the adoption of mobile financial services and understand people's intention to adopt and use of mobile banking services which lead to increases accessibility towards financial products among rural people as well improve standards of living and overall development of the nation. The study focuses on utilizing secondary sources which is related to financial inclusion to understand the new banking technology and identifies people's behavior towards adoption and uses of banking services.

Banks and non-bank organizations use DFS and the analysis indicates non-bank-based DFS emerges as the most efficient means of delivering cost effective financial services to the previously unbanked. Mobile cellular penetration and internet usage are mutually inclusive means through which digital financial services foster financial inclusion. Analysis of data for Ghana, as a case study, uses ordinary least squares and logistic regression models. The results in Difference-In-Difference method confirms the positive significant trend of mobile money usage and negative trend of bank-based DFS facilities over the period 2011-2014 in Ghana. Unambiguous policy ramifications are emphasized, paying attention to technological deepening stimulate positive outcomes of a broader and inclusive financial system. A study on Financial Inclusion and Digital Financial Services: Empirical evidence from Ghana by Agyekum, Francis and Locke, Stuart and Hewa-Wellalage, Nirosha (2016) proved that digital financial services foster financial inclusion.

2.4 The Impact of Mobile Money on Financial Inclusion in Developing Countries

Mobile money has had a significant impact on financial inclusion and poverty reduction in developing countries. By allowing individuals and small businesses to access banking services through their mobile phones, mobile money has helped to increase financial inclusion in many countries where traditional banking services may not be widely available.

One of the key benefits of mobile money is that it allows individuals and small businesses to access financial services that they may not have been able to access before. For example, mobile money allows individuals in rural areas to open bank accounts and access credit, even if there are no physical bank branches nearby. This can be particularly important for small farmers and other small business owners who may not have had access to capital before. Mobile money has also helped to reduce poverty by increasing access to financial services for low-income individuals and households. By providing these individuals and households with access to savings and credit services, mobile money can help them to better manage their finances and build a more secure future.

Additionally, mobile money has also helped to improve financial literacy and promote financial education. By providing individuals with access to financial services through their mobile phones, mobile money has made it easier for them to learn about financial management and develop financial skills. Moreover, it also helps in reducing the informal economy and increase the formal economy by facilitating the transactions, payments and reducing the cash dependency, which also helps in reducing the corruption.

Overall, mobile money has been an important tool for increasing financial inclusion and reducing poverty in developing countries. However, challenges such as limited digital literacy and lack of access to mobile phones and internet connectivity still persist and need to be addressed for mobile money to be fully beneficial to those living in poverty.

2.5 The Use of Digital Financial Services among Low-income and Unbanked Populations

The use of digital financial services (DFS) has the potential to increase financial inclusion among low-income and unbanked populations, who have historically been excluded from the formal financial sector. DFS such as mobile money and online lending platforms can provide individuals and communities with access to a range of financial services, including savings, credit, and payments, regardless of their location or financial status.

A number of studies have shown that DFS can be particularly beneficial for low-income and unbanked populations. For example, research has found that mobile money can increase access to savings and credit, leading to improved financial management and increased economic activity among low-income individuals. Furthermore, digital payments can also help to reduce the cost and increase the convenience of financial transactions, making them more accessible to low-income and unbanked populations.

However, the adoption and usage of DFS among low-income and unbanked populations is not automatic. A number of barriers to adoption need to be overcome, such as a lack of access to technology and digital literacy, lack of trust in new technologies, and low levels of financial literacy. In addition, many low-income and unbanked populations have little or no experience with formal financial services and may not be aware of the benefits of using DFS. To overcome these barriers, it is important to provide targeted education and awareness-raising campaigns to increase financial literacy and digital literacy among low-income and unbanked populations. Additionally, governments and private sector players should work together to develop regulatory frameworks that support the growth of DFS while also protecting consumers. Furthermore, partnerships between mobile network operators, financial institutions, and other organizations can also help to increase access to DFS and promote their use among low-income and unbanked populations.

DFS increases financial inclusion among low-income and unbanked populations, through providing affordable and reliable formal financial services to mass population. However, it is important to address the barriers to adoption and usage. Targeted education, consumer protection and partnerships between different stakeholders can help to increase the adoption and usage of DFS among these populations.

2.6 Digital Identity and Its Role in Financial Inclusion

Digital identity refers to the use of digital technologies to establish and verify an individual's identity, and it plays a critical role in enabling financial inclusion.

Without a reliable and secure way to identify individuals, it is difficult to provide them with access to financial services, such as opening a bank account or obtaining a loan.

Digital identity systems can help to overcome traditional barriers to financial inclusion, such as lack of documentation or difficulty in verifying identities. For example, digital identity systems that use biometric data, such as fingerprints or facial recognition, can help to establish the identity of individuals who may not have traditional forms of identification, such as a government-issued ID. Additionally, digital identity systems can also facilitate the onboarding of new customers, as they can automate the process of collecting and verifying personal information.

Digital identity systems also play a critical role in reducing fraud and increasing security in the financial sector. By providing a secure and reliable way to identify individuals, digital identity systems can help to prevent identity theft and other forms of financial fraud, while also increasing trust in the financial system. However, there are also potential challenges associated with digital identity systems, such as data privacy and security concerns. It is important to ensure that digital identity systems are designed and implemented in a way that respects individuals' privacy and protects their personal information. Furthermore, there is also a need to ensure that digital identity systems are inclusive, and that all individuals, including those who are low-income or unbanked, have access to them.

Digital identity enables financial inclusion, by allowing individuals to prove their identity in a secure and reliable way. Digital identity systems can help to overcome traditional barriers to financial inclusion, such as lack of documentation, while also reducing fraud and increasing security in the financial sector. However, it is important to ensure that digital identity systems are inclusive and respect individuals' privacy.

2.7 Previous Studies of Digital Financial Inclusion

Digital financial services have been a key driver of financial inclusion in recent years. While there is evidence that financial inclusion through traditional services has a positive impact on economic growth. The study by International Monetary Funds (2021) which used cross-sectional instrument variable procedure, found that the exogenous component of digital financial inclusion is positively associated with growth in GDP per capita during 2011-2018, which suggests that digital financial inclusion can accelerate economic growth. Fractional logit and random effects empirical estimation identifies access to infrastructure, financial and digital literacy, and quality of institutions as key drivers of digital financial inclusion. The study by Aziz & Naima (2019) stated that the social dynamics of financial engagement with new technologies require a move beyond a simple individualistic adopter/non-adopter binary framework and 'supply oriented' financial infrastructure. The study also concluded that although digital services have eased and bridged the gap of physical access to financial services, such services have not been utilised due to lack of basic connectivity, financial literacy, and social awareness. The research of Lee-Ying Tay etl. found that developing countries, mainly Asian countries, embrace and improve digital financial inclusion to help reduce poverty. However, the results indicated that in developing countries, a persistent divide exists between gender, the wealthy, and the poor, and urban and rural areas regarding access to and usage of digital financial services. A study in Uganda also found that that banks must innovate to increase their contribution towards enhancing financial inclusion. Additional channel innovations, which may infuse banking and mobile money channels, are needed for banking to leverage on growth of mobile money and regain its role in enhancing financial inclusion. Leveraging the application of digital innovations in services such as payments and digitizing alternative channels such as agent banking are likely to increase efficiencies in physical channels and the provision of banking services and thereby increase overall reach and penetration of banking. The fast pace of mobile money penetration is good for speeding up financial inclusion. However, this calls for better regulatory approaches for DFS risk reduction, consumer protection, and protecting mobile money against integrity and financial crimes (Ebong, & George (2021)).

CHAPTER 3
MYANMAR'S DIGITAL FINANCIAL SERVICES, CHALLENGES AND OPPORTUNITIES

Myanmar has a relatively low level of financial inclusion, with only around 20% of adults having a formal bank account. However, the country has a large mobile phone penetration rate, which presents opportunities for digital financial services to increase financial inclusion. Some challenges to digital financial inclusion in Myanmar include a lack of financial literacy and trust in digital financial services, as well as a lack of infrastructure and regulations. Despite these challenges, there are a number of initiatives and projects underway to increase digital financial inclusion in Myanmar, such as the use of mobile banking and the development of digital payment systems.

3.1 Financial Inclusion Status in Myanmar

In 2013, according to the Myanmar Finscope study, 70% of the adult population is financially excluded or only informally served. Only 6% of the population use more than one financial product and only 5% of adults have a bank account. Microfinance in Myanmar has increasingly grown over the past few years to become an important sector of financial service providers targeting low-income population excluded from the regular financial system. The Government gives an important role to it and more comprehensibly to Inclusive Finance as a means to reduce poverty.

Myanmar has been facing financial inclusion challenges for many years. The country has a largely unbanked population, with a majority of citizens lacking access to formal financial services. This has been a significant hindrance to the country's economic development, as it limits the ability of individuals and small businesses to access the capital they need to grow and thrive.

In recent years, the government of Myanmar has made efforts to increase financial inclusion through a variety of measures. One key approach has been to promote the use of mobile banking, which has grown rapidly in the country in recent years. This has helped to increase financial inclusion by providing citizens with access to banking services through their mobile phones, even in areas where there are no physical bank branches. Another approach has been to issue licenses to foreign and domestic microfinance institutions. This has helped to increase the number of small loans available to citizens, which is especially important for those who may not have access to traditional bank loans.

However, the country still facing many issues like, limited access to banking services, lack of financial literacy, distrust in formal financial institutions, and inadequate infrastructure and digital connectivity are among the main factors that have hindered the development of a robust financial inclusion landscape in Myanmar.

The Central Bank of Myanmar has been working to increase the number of branches of commercial banks and increase access to banking services for citizens in rural areas. Additionally, the use of mobile banking has grown rapidly in recent years, which has helped to increase financial inclusion in the country. The government has also been working to improve the country's infrastructure and digital connectivity, which will be important for increasing financial inclusion in the future.

Overall, while progress has been made in recent years, Myanmar still has a long way to go in terms of financial inclusion. The government and other stakeholders will need to continue to work together to address the underlying challenges and create a more inclusive financial system that can support the country's economic growth.

3.2 Lack of Financial Literacy and Trust in Digital Financial Service

One of the major challenges to digital financial inclusion in Myanmar is the lack of financial literacy and trust in digital financial services among the population. Many people in Myanmar have limited understanding of financial concepts and how digital financial services work, which makes it difficult for them to use these services effectively. Additionally, there may be a lack of trust in digital financial services, which could be due to a lack of understanding of the technology, concerns about security, or past experiences with financial services.

To address this challenge, financial education and awareness campaigns can be implemented to educate people about digital financial services and how to use them safely and securely. This could include training programs for financial service providers, as well as outreach efforts to educate consumers about the benefits and risks of digital financial services. Additionally, building trust and transparency in the digital financial services sector can be achieved through regulatory oversight and consumer protection measures, such as providing clear and consistent information about fees and terms, and offering dispute resolution mechanisms.

Another potential solution is to leverage the network of existing community-based organizations, such as the microfinance institutions and cooperatives, which have a strong presence and trust in the local communities, to provide financial education and promote digital financial services.

3.3 Limited Infrastructure and Technology for Digital Financial Services in Myanmar

Another major challenge to digital financial inclusion in Myanmar is the limited infrastructure and technology for digital financial services. Myanmar has a relatively underdeveloped banking sector and limited access to financial services, which makes it difficult to implement digital financial services. Additionally, there are also limited options for digital financial service providers to connect to the existing financial infrastructure, such as the Central Bank and other financial institutions.

To address this challenge, it is important to invest in the development of the necessary infrastructure and technology to support digital financial services. This could include the development of a robust and secure digital payment system, as well as the expansion of internet and mobile network coverage in remote and underserved areas. The government and private sector can also collaborate to establish regulations and standards to ensure the security and reliability of digital financial transactions.

Another important aspect is to develop a framework for digital identity, which would allow for the reliable identification and onboarding of customers. This can be achieved through the use of digital identity solutions such as biometric technology, which can be used to verify the identity of customers remotely. Additionally, there are initiatives to promote digital financial inclusion in Myanmar, such as the use of mobile banking and the development of digital payment systems. However, these efforts are hindered by the lack of connectivity and the limited availability of mobile banking services in rural areas. To address this, it is important to invest in the expansion of mobile network coverage in remote and underserved areas, and to develop mobile banking solutions that are accessible to people with limited access to technology.

Limited infrastructure and technology for digital financial services in Myanmar is a major challenge to digital financial inclusion. To address this challenge, it is important to invest in the development of necessary infrastructure and technology, establish regulations and standards, and to promote digital identity solutions. Additionally, it is important to expand mobile network coverage in remote and underserved areas to increase accessibility to digital financial services.

3.4 Role of International Organizations in Promoting Digital Financial Inclusion in Myanmar

International organizations play an important role in promoting digital financial inclusion in Myanmar. These organizations provide funding, technical assistance, and policy guidance to support the development of digital financial services in the country.

One key international organization that has been involved in promoting digital financial inclusion in Myanmar is the World Bank. The World Bank has provided funding and technical assistance to support the development of digital financial services in Myanmar, particularly through its Financial Inclusion Support Framework (FISF). The FISF is a multi-year program that aims to increase access to financial services in the country, including through the use of digital financial services.

Another international organization that has been involved in promoting digital financial inclusion in Myanmar is the International Finance Corporation (IFC). The IFC is a member of the World Bank Group and is focused on promoting private sector development in emerging markets. In Myanmar, the IFC has provided funding and technical assistance to support the development of digital financial services, including through the use of mobile banking and digital payments. The IFC has also provided support for the development of regulations and policies to promote the growth of digital financial services in Myanmar.

The Asian Development Bank (ADB) has also been actively involved in promoting digital financial inclusion in Myanmar. The ADB has provided funding and technical assistance to support the development of digital financial services in Myanmar, particularly through its Financial Sector Development Program (FSDP). The FSDP aims to increase access to financial services in the country, including through the use of digital financial services. The ADB has also provided support for the development of regulations and policies to promote the growth of digital financial services in Myanmar. Finally, the United Nations Capital Development Fund (UNCDF) has also been actively involved in promoting digital financial inclusion in Myanmar. UNCDF has provided funding and technical assistance to support the development of digital financial services in Myanmar, particularly through its Access to Finance program. The program aims to increase access to financial services in the country, including through the use of digital financial services.

International organizations such as the World Bank, the IFC, ADB, and UNCDF have played an important role in promoting digital financial inclusion in Myanmar. These organizations provide funding, technical assistance, and policy guidance to support the development of digital financial services in the country, which can help to increase access to financial services for people who may not have access to traditional brick-and-mortar financial institutions.

3.5 Comparison of Digital Financial Inclusion in Myanmar to other Southeast Asian Countries

Comparing digital financial inclusion in Myanmar to other Southeast Asian countries highlights some of the unique challenges and opportunities that Myanmar faces in promoting digital financial inclusion.

Myanmar has a relatively low level of financial inclusion compared to other Southeast Asian countries, with only around 20% of adults having a formal bank account. However, the country has a large mobile phone penetration rate, which presents opportunities for digital financial services to increase financial inclusion. In contrast, countries like Indonesia, Thailand and the Philippines have relatively high levels of financial inclusion, with over 80% of adults having a formal bank account. These countries have a more developed banking sector and a higher level of financial literacy among the population. Additionally, these countries have a more developed digital financial services sector with a large number of digital financial service providers and mobile banking services available.

One of the major challenges that Myanmar faces in comparison to other Southeast Asian countries is the lack of infrastructure and technology for digital financial services. Myanmar has a relatively underdeveloped banking sector and limited access to financial services, which makes it difficult to implement digital financial services. Additionally, there are also limited options for digital financial service providers to connect to the existing financial infrastructure, such as the Central Bank and other financial institutions. Another challenge is the lack of financial literacy and trust in digital financial services among the population. Many people in Myanmar have limited understanding of financial concepts and how digital financial services work, which makes it difficult for them to use these services effectively. Additionally, there may be a lack of trust in digital financial services, which could be due to a lack of understanding of the technology, concerns about security, or past experiences with financial services.

However, Myanmar has a large mobile phone penetration rate, which presents opportunities for digital financial services to increase financial inclusion. Also, there are initiatives to promote digital financial inclusion in Myanmar, such as the use of mobile banking and the development of digital payment systems, which could help to increase financial inclusion in the country. In summary, Myanmar faces unique challenges in promoting digital financial inclusion compared to other Southeast Asian countries, particularly in terms of infrastructure and technology, financial literacy, and trust in digital financial services. However, the country also has significant opportunities to increase financial inclusion through the use of mobile banking and digital payment systems, due to the high mobile phone penetration rate.

3.6 Role of Mobile Phone Penetration in Increasing Financial Inclusion

Mobile phone penetration is a key opportunity for increasing financial inclusion in Myanmar. With over 80% of the population owning a mobile phone, the use of mobile technology can be a powerful tool for providing financial services to underserved and unbanked populations. Mobile banking, in particular, has the potential to make financial services more accessible and convenient for people who live in remote or underserved areas.

The use of mobile phones for digital financial services can also help to overcome some of the challenges that Myanmar faces in terms of financial literacy and trust in digital financial services. With mobile banking, people can conduct transactions with ease, and through the use of USSD codes, people with limited literacy or language skills can access digital financial services. Additionally, mobile banking services can be designed to be user-friendly and easy to understand, which can help to build trust in digital financial services among consumers.

Mobile phone providers in Myanmar are also actively working to expand their financial services offerings, by partnering with banks, mobile money providers and other financial service providers to offer services such as mobile banking, mobile money transfers, and digital payments. This partnership between mobile phone providers and financial service providers allows for the leveraging of the existing mobile phone infrastructure, and the large customer base of mobile phone providers to reach more people with financial services.

However, there are still some challenges to overcome in order to fully leverage the potential of mobile phone penetration for financial inclusion. One of the main challenges is to expand mobile network coverage in remote and underserved areas. Additionally, there is a need to develop mobile banking solutions that are accessible to people with limited access to technology, such as those living in rural areas or with low-income. Mobile phone penetration presents a significant opportunity for increasing financial inclusion in Myanmar. The use of mobile technology can make financial services more accessible and convenient for people who live in remote or underserved areas and can help to overcome some of the challenges of financial literacy and trust in digital financial services. However, challenges such as expanding mobile network coverage in remote areas and developing mobile banking solutions that are accessible to all still need to be addressed.

3.7 Impact of Digital Financial Services on Financial Inclusion and Economic Development

Digital financial services have the potential to have a significant impact on financial inclusion and economic development in Myanmar.

One of the main opportunities is the potential for digital financial services to reach remote and underserved populations. With a large proportion of the population living in rural areas and limited access to traditional banking services, digital financial services can provide access to financial services for those who may not have access to traditional banking services. This can help to increase financial inclusion and provide opportunities for economic development in these areas.

Another opportunity is the potential for digital financial services to improve access to credit and financial services for small and medium-sized enterprises (SMEs). Digital financial services can provide a more efficient and cost-effective way for SMEs to access credit and other financial services, which can help to promote entrepreneurship and economic growth. This can also lead to the creation of jobs and improvement of livelihoods.

Digital financial services can also improve transparency and efficiency in government payments and disbursements. Digital financial services can help to reduce the cash economy and increase transparency in government spending, which can help to reduce corruption and promote economic growth.

Furthermore, digital financial services can support the development of a cashless society in Myanmar, which can lead to a reduction in the costs associated with cash transactions and increase the efficiency of the financial system. This can help to promote economic growth and reduce poverty. Digital financial services have the potential to have a significant impact on financial inclusion and economic development in Myanmar by increasing access to financial services for remote and underserved populations, improving access to credit and financial services for SMEs, improving transparency and efficiency in government payments and disbursements, and supporting the development of a cashless society.

3.7.1 Potential for Digital Financial Services to Reach Remote and Underserved Populations in Myanmar

Digital financial services have the potential to reach remote and underserved populations in Myanmar, where access to traditional financial services is limited.

One of the main opportunities is the use of mobile technology, which can be a powerful tool for providing financial services to people living in remote and underserved areas. Mobile banking, in particular, has the potential to make financial services more accessible and convenient for people who live in remote or underserved areas. Through the use of USSD codes ,(Unstructured Supplementary Service Data is a Global System for Mobile Communications (GSM) protocol that is used to send text messages), people with limited literacy or language skills can access digital financial services. Additionally, mobile banking services can be designed to be user-friendly and easy to understand, which can help to build trust in digital financial services among consumers.

Another opportunity is the use of digital identity solutions, such as biometric technology, which can be used to verify the identity of customers remotely. This can help to overcome the challenges of identifying and onboarding customers in remote and rural areas. Additionally, leveraging the network of existing community-based organizations, such as the microfinance institutions and cooperatives, which have a strong presence and trust in the local communities, can help to provide financial education and promote digital financial services.

However, there are still some challenges to overcome in order to fully leverage the potential of digital financial services to reach remote and underserved populations in Myanmar. One of the main challenges is to expand mobile network coverage in remote and underserved areas. Additionally, there is a need to develop digital financial services that are accessible to people with limited access to technology, such as those living in rural areas or with low-income.

3.7.2 Potential for Digital Financial Services to Improve Access to Credit and Financial Services

Digital financial services, including mobile banking and online lending platforms, have the potential to greatly improve access to credit and financial services for small and medium-sized enterprises (SMEs) in Myanmar. One of the main benefits of digital financial services is that they can increase access to credit for SMEs that may not have been able to access traditional bank loans. Online lending platforms, for example, can provide quick and easy access to capital for small businesses, which can be crucial for their growth and development.

Digital financial services can also help to improve access to financial services for SMEs by reducing the need for physical bank branches. With mobile banking, for example, businesses can access banking services through their mobile phones, even if there are no physical bank branches nearby. This can be particularly important for businesses located in rural areas or in areas with limited banking infrastructure. Furthermore, digital financial services can also help to increase transparency and reduce corruption in the banking sector by providing more accurate and verifiable data on transactions. This can help to build trust between banks and SMEs, which is crucial for increasing access to credit and financial services.

However, there are also challenges that need to be overcome in order for digital financial services to fully benefit SMEs in Myanmar. For example, limited access to digital devices and internet connectivity, low financial literacy and lack of trust in digital financial services may hinder the adoption and use of digital financial services among SMEs. Overall, digital financial services have the potential to greatly improve access to credit and financial services for small and medium-sized enterprises in Myanmar. However, it will require addressing these challenges and building the necessary infrastructure, such as digital literacy and trust, to fully benefit the SMEs in Myanmar.

3.8 Potential for Digital Financial Services to Support the Development of a Cashless Society in Myanmar.

Digital financial services, such as mobile banking and online payments, have the potential to support the development of a cashless society in Myanmar. These services can increase financial inclusion by providing access to banking services to individuals and businesses that may not have had access before. Additionally, digital financial services can increase the efficiency and security of transactions, reducing the reliance on cash. One of the main advantages of digital financial services is that they can increase financial inclusion by providing access to banking services to individuals and businesses that may not have had access before. This is particularly important in Myanmar, where many people live in rural areas and are not served by traditional brick-and-mortar banks. Digital financial services can also be used to reach underbanked populations, such as small farmers and informal sector workers, who may not have access to traditional banking services.

Digital financial services can also increase the efficiency and security of transactions, which can be especially beneficial in a country like Myanmar where cash is still widely used. Digital transactions can be processed more quickly and securely than cash transactions, and they can also be tracked and audited more easily. This can reduce the risk of fraud and money laundering, and make it easier to detect and prevent financial crimes. However, there are still some challenges to be addressed in order to fully realize the potential of digital financial services in Myanmar. One of the main challenges is a lack of trust in digital financial services among some segments of the population. Many people in Myanmar are still unfamiliar with digital financial services and may be hesitant to use them due to concerns about security and reliability. This is particularly true for older people or those living in rural areas who may not be as familiar with technology as those living in the urban areas. Additionally, limited access to technology in Myanmar can make it difficult for people to use digital financial services, and it can also limit the reach of digital financial service providers.

In conclusion, digital financial services have the potential to support the development of a cashless society in Myanmar by increasing financial inclusion, improving the efficiency and security of transactions, and reducing the reliance on cash. However, it's important to address the challenges such as lack of trust and limited access to technology in order to fully realize the potential of digital financial services in Myanmar.

CHAPTER 4
SURVEY ANALYSIS

4.1 Survey Profile

This chapter analyzed on contribution of digital financial services in financial inclusion in Shwe Paukkan Township on current situation. Shwe Paukkan township is situated in Eastern District of Yangon region, as a part of North Okkalapa Township. Total population in the township is 66531 and among them 55.3 percent is female, and 44.7 percent is male. Due to the limitation in timeframe and larger population size of Shwe Paukkan Township, the survey was designed by structural questionnaires and used snowball sampling technique. The results were based on the collectively gathered data from 100 questionnaires in ShwePaukkan Township. The questionnaires are designed to examine importance of digital banking platforms in accessing financial services of population. The questionnaires are also focused to reflect the challenges and opportunities which are faced by the public and based on the results, the study aims to provide the result-based recommendations.

4.2 Survey Design

The data is analyzed to identify the challenges and opportunities in digital financial inclusion in ShwePaukkan Township. Descriptive method is used in this study and constructed as well as opened questionnaires are used to determine the opportunities and challenges associated with digital financial services from the respondents' perspectives. The analysis in the study consisted of simple frequencies or percentages for each category in the questionnaires item. Opened questions were used to capture the respondent's opinion on opportunities and challenges of digital financial services and the summarized the most appeared answers as a key opportunities and challenges for using digital financial services in financial inclusion in ShwePaukkan township.

4.3 Analysis of the Study Area

The detailed findings from the survey are described in the following sections.

4.3.1 Characteristics of the respondents

According to the survey data of the study, 51% of respondents are male followed by 49% of female. Majority of the age of respondents are 21-29, representing 47% and second largest age group is 30-39 which represented by 32%, followed by and followed by 40-49 (10%), 18-20 (4%),50-59 (4%) and 60-above (3%).

The academic level of respondents are (i) 76% are graduated people, (ii) 20% are high school level and (37%) post graduated people and (iii) only 4 % are post graduated respectively. In the context of income, 56% of respondents earned 4-7 lakhs income per month while 31% of respondents received 1-3 lakhs income per month, followed by 11% and 2% of respondents had higher monthly income which is around 7-10 lakhs and 11 lakhs and above, respectively (See in Table 4.1).

Table (4.1) Characteristic of Respondents

No.	Variable	Characteristics	No. of Respondent	Percentage
1.	**Gender**	Male	51	51
		Female	49	49
		Total	**100**	**100**
2.	**Age**	18-20	4	4
		21-29	47	47
		30-39	32	32
		40-49	10	10
		50-59	4	4
		60 or older	3	3
		Total	**100**	**100**
3.	**Education**	High School	20	20
		Graduated	76	76
		Post Graduated	4	4
		Total	**100**	**100**

Table (4.1) Characteristic of Respondents (Continued)

No.	Variable	Characteristics	No. of respondent	Percentage
4.	Monthly income	between 100000 - 300000	31	31
		between 300000 - 700000	56	56
		between 700000 - 1000000	11	11
		> 1000000	2	2
		Total	**100**	**100**

Source: Survey data 2022

4.4 Accessibility of Banking Services

Major banking services include checking and savings accounts, loan and mortgage services, wealth management, and providing Credit and Debit Cards. Access to the formal banking services is one of the importance factors which can encourage economic opportunities and reduce the risks stemmed from the informal financial services. It is also one of the key indicators measure financial inclusion in the country. Being able to have access to a transaction account is a first step toward broader financial inclusion since a transaction account allows people to store money and send and receive payments. A transaction account serves as a gateway to other financial services. According to the survey results, majority of the respondents have at least one formal bank account and only 10% of respondents are non-banked people. Most respondents started open the formal transaction account in later 2016, mostly in 2018, reflecting the banking sector development and economic growth in these periods.

Table (4.2) Access to Banks

	Number of Respondent			% of Respondent		
	Yes	**No**	**Total**	**Yes**	**No**	**Total**
Have Bank account	90	10	100	90	10	100
Have more than one bank account	33	67	90	36.7	63.3	100

Source: Survey data 2022.

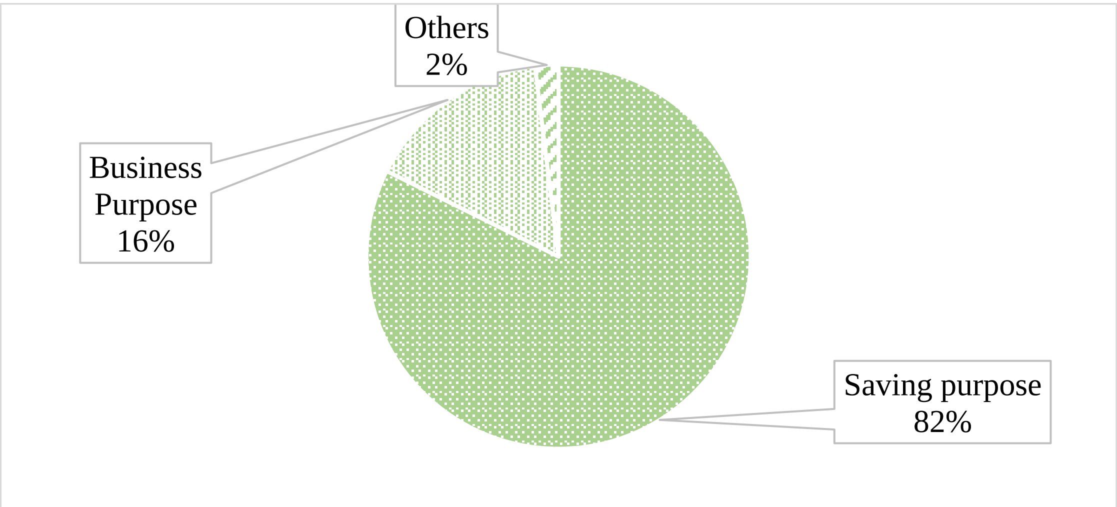
The findings also revealed Myanmar's practice of keeping separate bank accounts to minimize default risk and navigate challenges associated with banking operations. 36.7% of respondents had more than one bank accounts, while 63.3% had only one bank account. The study also found that the primary objective of having bank account is to save money as well as for business purpose. In addition, lower income or lack of extra income to save remained as a major reason among the non-banked respondents. Therefore, the findings showed that, despite living in metropolitan locations where it is convenient to commute to banks, those with lower incomes are more inclined to delay using formal banking services or opening bank accounts.

Table (4.3) Level of Income and Bank Account

No.	Income Level	No Bank Account	Percentage
1.	Around 1-3 lakh	8	80
2.	Around 3-7 lakhs	2	20
3.	Around 7-10 lakhs	-	
4.	10 lakhs and above	-	
Total		**10**	**100**

Source: Survey data 2022

Figure (4.1) Reasons for Opening Bank Account



Source: Survey data 2022

4.5 Accessibility to Internet

Internet plays a key role in promoting digital financial inclusion across the country. Internet access that is both affordable and convenient can encourage people to use digital financial services. In Myanmar, mobile data network became the priority internet services which population started to use around 2010. Mobile phone penetration rate started to higher, representing 45.9% in 2022, increased significantly from 26% in 2017. With this rapid rise in mobile phone penetration, Myanmar's internet user rate also increased at a significant average rate of 25% per year. Easier access to the internet services across the country strongly support the growth of digital financial services in Myanmar. In 2023, 37.3% of population use at least one digital financial service, particularly in payment and transaction (Datareportal 2023). The study also found out that 100% of respondents able to access the mobile data network and majority 96% of respondents use at least one mobile money application in transaction and payment. Only 4% of respondent didn't use any mobile money or digital financial services (in Table 4.4).

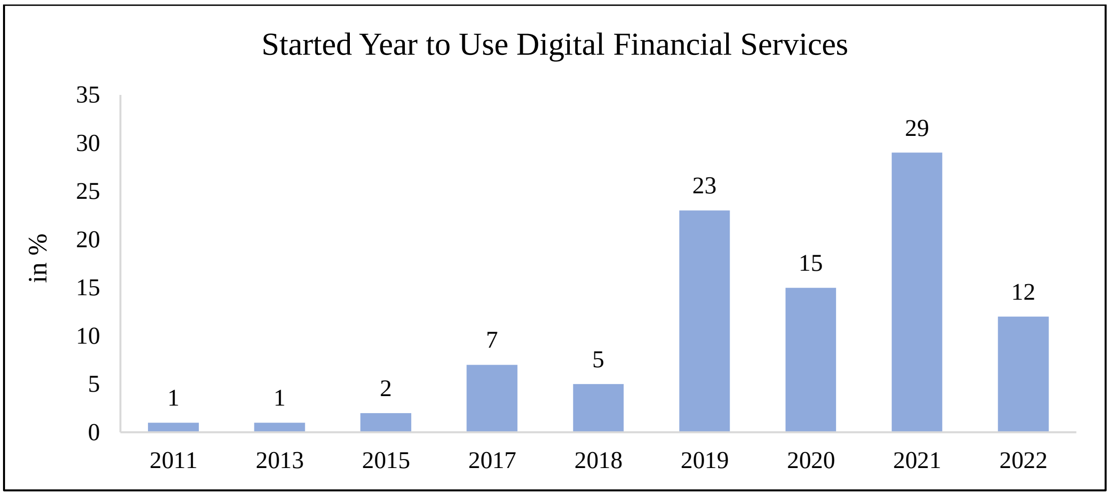
Table (4.4) Access to Internet Network and Mobile Money/Banking

No.		No. of Respondent			% of Respondent		
		Yes	No	Total	Yes	No	Total
1.	Have access to mobile data network	100	0	100	100	0	100
2.	Use any mobile money or mobile banking apps	96	4	100	96	4	100

Source: Survey Data 2022.

The finding indicated that majority of respondents started to use the digital financial services in 2021 and 2019, represented 29% and 23% of the total respondents, respectively. Therefore, the study found that the usage of digital financial services is closely linked with the financial sector development, economic growth and development of digitalization process. Following the country's political reforms in 2011, Myanmar invested heavily in telecommunications, reducing the price of SIM cards, smartphones and data coverage. This increased connectivity facilitated the rise in fintech services as a modern tool for financial inclusion. One of the top mobile money providers, Wave Money started their operation and introduced their e-wallet services in Myanmar in 2018 and thus also significantly supported the usages of digital financial services, mostly in rural and sub urban areas where access to banking services is limited. In addition, COVID-19 pandemic also pushed population to use digital financial services under the strict travel restriction measurements. During COVID-19 pandemic in mid-2020, Myanmar saw a spike in digital payment use as citizens opted out of cash to minimize physical contact. In addition to Wave Money, One Pay, a mobile application launched in April, is providing interbank digital services and cash-in services that do not require physical contact with bank associates or anyone else. The venture launched during the peak of COVID-19 restrictions and garnered massive support from locals. Over a month, subscriptions to One pay app rose to 150,000 users.

Figure (4.2) Year Starting to Use Digital Financial Services



Source: Survey Data 2022

4.6 Purpose of Using Digital Financial Services

According to the findings from the study, Table 4.5 described the major purpose of using digital financial services are transaction and payment. 78% of respondents used digital financial services in their payment and 100% of respondents used it for transaction purposes. It is indicated that development of digital financial services improved money transferring across the country and reduced the risks of using informal services in transaction. Moreover, the ability and flexibility to view statements and account balances is one of the top reasons for using digital financial services. respondents also used mobile money or ibanking apps to check their bank balance at home without required to commute to the banks, and 88% of respondents checked their bank balance via apps. 91% of respondents has owned mobile money account as well as ibanking apps. 92% of respondents have positive opinion on related mobile apps for digital financial services and responded as these apps are user friendly types and easy to use without requiring advanced technical knowledge.

Table (4.5) Major Purposes of using Digital Financial Services

No.	Major Purposes	No. of Respondent			% of Respondent		
		Yes	No	Total	Yes	No	Total
1	Payment	78	22	100	79	22	100
2	Transaction	100	0	100	100	0	100
3	Saving	25	75	100	25	75	100
4	Check the balance statement	88	12	100	88	12	100

Source: Survey Data 2022

Among the digital finance service users, 6.4% of respondents used digital financial services in their daily payment and transaction while 90% of respondents often use digital financial services. Only 2.6% of respondents rarely used digital financial services mainly because of their cash preference in payment and transaction process (in Table 4.6).

Table (4.6) Digital Financial Services in Day-to-Day Payment

No.	DFS usage	No. of Respondent	% of Respondent who used DFS in Payment
1	Daily	5	6.4
2	Often	71	91.0
3	Rarely	2	2.6
Total Respondent who used DFS in payment		78	100

Source: Survey Data 2022

Although 96% of respondents had at least one mobile money apps or ibnaking apps, cash payment dominated in day-to-day payment. This is mainly because Myanmar remains as a cash-based society and the digital payment do not support in all shops and stores in ShwePaukKan which is relatively a suburban area compared to the downtown areas of Yangon. 75% of respondents needed to use both cash and digital services in payment, and only 2% used digital services in almost all their payments.

4.7 Opportunities of Using Digital Financial Services

The study used open questions in analyzing the respondents' opinion on opportunities to use digital financial services, including mobile money, ibanking apps and credit and debit cards. Based on the findings, the major benefits of using digital financial services can be concluded as follow;

(1) E-commerce (online shopping payment)

(2) Convenience to transfer money.

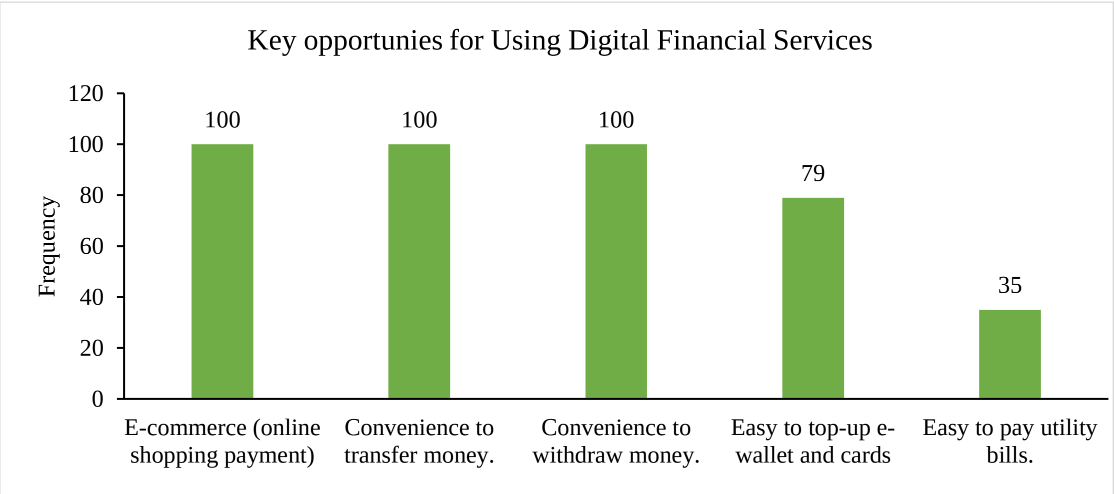
(3) Convenience to withdraw money.

(4) Easy to top-up e-wallet and cards

(5) Easy to pay utility bills.

Since some opportunities are expressed by multiple respondents and included in the answer list more than one time, the study used the frequency distribution to map out these opportunities. Frequency distribution is a descriptive method which shows the different measurement categories and the number of observations in each category. It shows whether the observations are high or low and also whether they are concentrated in one area or spread out across the entire scale. Thus, frequency distribution presents a picture of how the individual opportunities are distributed in the measurement scale. In Figure (4.3), online shopping payment, easy to transfer money and withdraw money are key opportunities expressed by all respondents during the survey.

Figure (4.3) Key Opportunities of Digital Financial Service



Source: Survey Data 2022

The findings suggested that digital financial services relaxed the rules and regulations imposed by the banks and flexibility in timeframe to use the services provided convenience in accessing the services. For instance, digital financial services provide the services, particularly the payment and transaction, 24 hours per day including the weekends even when the banks did not provide the services. This function supports people to use the services at any time and any day and fast and easy transfer and payment can be done accordingly. Therefore, it indicated that digitalization in financial sector created more efficiency in providing the services.

The findings showed that digital financial services boosted Myanmar's online shopping and e-commerce sectors in particular. The majority of online stores are micro and small enterprises, hence advancements in digital financial services have largely aided the establishment of these types of businesses in Myanmar by facilitating transactions and payments between sellers and customers.

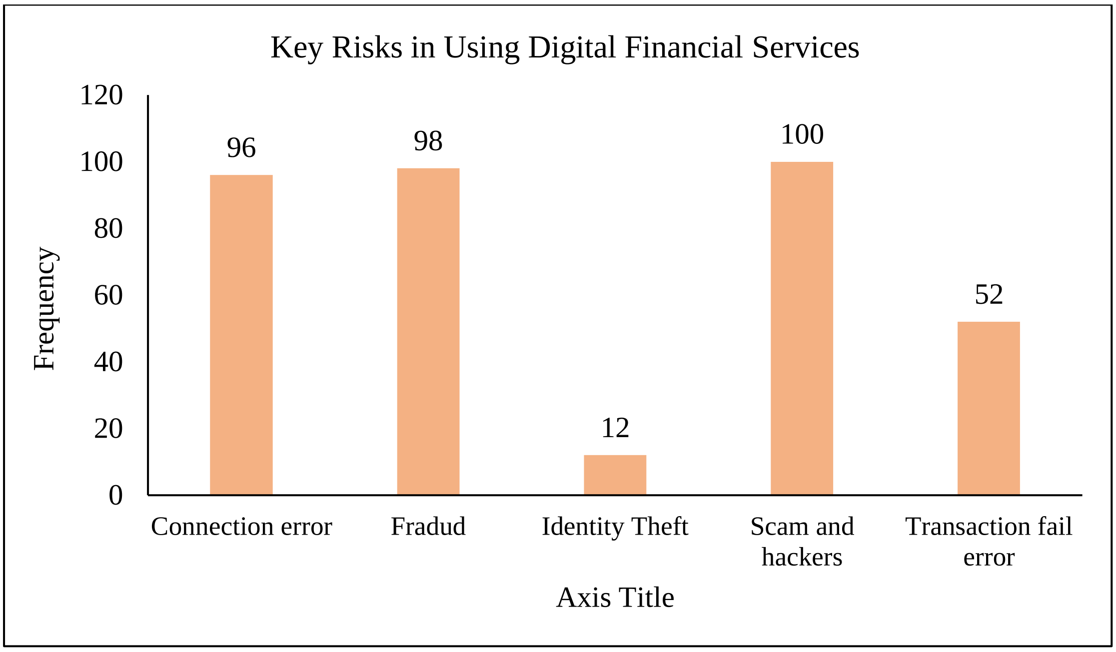
4.8 Challenges of Using Digital Financial Services

Similar to the opportunities, open-ended questions were used to assess the respondents' perceptions of the problems associated with adopting digital financial services. Based on their own experiences, the respondents indicated the main obstacles they faced when using digital financial services. Regarding to the respondent's perceptions on using digital services, 25% thought using digital financial services is risky and 75% of respondents were optimistic on digital payment and transaction. Based on the results from opened questions, the study classified the risks associated with digital financial services into two parts:

(1) Risks associated with technology and internet connection.
(2) Risks associated with cyber security.

The below is the frequency pivot chart which included the key challenges faced by the respondents.

Figure (4.4) Key Challenges of Digital Financial Service



Source: Survey Data 2022

The findings highlighted the importance of rules and regulations to mitigate cyber crime in digital financial inclusion. For digital financial services to support financial inclusion, the design of proportionate supervision and regulation (including licensing) is critical to creating an enabling environment for increased outreach by existing providers and entrance of new providers, including non-bank e-money issuers, while also protecting consumers. Empowering consumers will benefit to make informed financial decisions, exercise their rights, meet their obligations, and have access to adequate, timely and efficient redress for their complaints. This is particularly important when the target population is from a low-income and/or disadvantaged group, usually a more vulnerable segment of the population, since they may just be starting to use formal financial services and have limited ability or power to protect themselves from unfair practices.

CHAPTER 5
CONCLUSION

5.1 Findings

The growing body of research reveals many potential development benefits from the use of digital financial services, including mobile money services, payment cards, and other financial technology (or fintech) applications. A couple of remarkable examples of such benefits are the fact that digital financial services can help people manage financial risk by making it easier for them to collect money from distant friends and relatives when times are tough, and that digital financial services can significantly lower the cost of receiving payments. The use and promotion of digital financial services to advance financial inclusion. The essential components of digital financial inclusion are a digital transactional platform, a device used by the customer to electronically connect to this platform and perform financial transactions, the use of retail agents for the customer to transact from and the provision of a wide range of financial products and services.

Digital financial products and services have expanded rapidly over the past ten years. Initially, the field was primarily focused on the rapid advances with electronic money (E-Money) especially its use via Mobile Network Operators (MNOs) that offered mobile-enabled versions commonly referred to as mobile money (M-Money). Hence, early innovations focused on M-Money transfers and later evolved to focus on other services offered on top of M-Money platforms including remittances, savings, credit and insurance services.

In Myanmar, to help address multiple challenges in accessing formal financial services, digital financial services can serve as an important tool to improve access to credit, savings, insurance, and payments that enhance productivity and improve efficiency. Access to financial services is integral to rural development and overall economic growth, directly impacting gross domestic product (GDP) and productivity through more efficient allocation of resources. Myanmar’s rural economy, which is driven primarily by the agriculture sector, suffers from a severe lack of access to appropriately tailored, formal financial products and services that can increase agricultural production. Financial sector actors in Myanmar, constrained by their traditional brick and mortar branches and lack of new banking technologies, still operate predominantly in cash. This approach has restricted the expansion of services to new clients by banks and MFIs, adversely affecting households and businesses.

After a prolonged period of underinvestment, mobile infrastructure in Myanmar has experienced rapid developments since the licensing of two foreign mobile network operators (MNOs), Telenor and Ooredoo, in 2013. Consistent with rising mobile penetration throughout the country, the assessment revealed substantial rates of mobile phone ownership among farmers and upper value chain actors. Although usage among farmers is mainly limited to voice calls, upper value chain actors also reported using their phones for a wider variety of activities, such as to access the internet and send SMS. Coupled with the rapid spread of mobile network coverage, these mobile adoption and usage trends suggest a potentially strong foundation for mobile-enabled digital financial services.

Since 2011, the mobile phone and internet penetration rate increased sharply and these improvement in accessibility in mobile network enhanced access to the digital financial services. Introducing of mobile money which does not need to have a formal bank account encouraged non-banked population to access formal services and able to reduce the risks stemmed from the informal financial services. The transaction and payment flow become more efficient and effective by minimizing the time and costs. The Study found that mobile money was able to provide the basic financial services such as payment and transferring money to non-banked respondents. This finding also supported that digital financial services are important solution for financial inclusion, particularly for the non-banked, low-income population. The Study also found that digital financial services reduced the usage of informal services in transferring money across the country. No respondents used informal services in the Study.

The finding supported that low- income households used at least digital financial services despites they are less likely to access formal banking services even though living in metropolitan locations where easy to commute the banks. This is mainly due to the fact that the bank has more restrictions and limitations which seems to hinder the low-income clients to access the formal services while the digital financial services provided them to transfer or withdraw the minimum amount of money easily. Thus, this function enhances the financial inclusion in low-income households in both rural and urban areas. Digital financial services do not need a solid infrastructure to open a branches like banks and thus encourage the service providers to expand the services across the country and able to reach out to more clients than the banks do. This feature also encouraging to use digital financial services in financial inclusion in Myanmar.

The study revealed key opportunities in using digital financial services based on the respondents' answers. Flexibility in timeframe to withdraw or transfer or pay the money encourage efficiency and accessibility of formal services in population. Another major opportunity is that digital financial services improved the cash flow and payment flows between sellers and buyers and thus encouraged micro and small businesses, particularly for digitalized small businesses across Myanmar.

As the country has limited capacity on undertaking cyber security, digital services related rules and regulations, and basic infrastructure to improve internet connections, key challenges found in the study were closely linked with these issues. Technical errors and cyber crimes are key risks in Myanmar in the light of limited law enforcements and solutions.

5.2 Recommendations

The Findings suggested that digital financial services indeed an insightful and suitable solutions to develop financial inclusion in Myanmar. It can encourage the low-income, non-banked population to access formal financial services more than the banks due to its flexibility in time, lower transaction cost, able to transfer minimum amount of money and less complicated procedures. Moreover, according to the results, digital financial services, particularly mobile money apps are easy to use for Myanmar's people as it did not require an advanced technical knowledge and thus further enhance the people's perceptions on digital financial services. Therefore, the findings recommended to expand financial inclusion across Myanmar by broadening the services mostly in rural and suburban areas.

Promoting digital services environment which can ensure to protect the consumers should be undertaken. According to the findings, cyber security is a major threatening issue for digital finance users. Customers that are the target of digital financial inclusion are, by definition, inexperienced with formal financial services and often are not familiar with the use of digital technology beyond the use of mobile phones to make calls. They may have limited literacy and numeracy. This often results in customers sharing their personal identification number (PIN) and their card or phone. These customers may also not be aware of their own rights as consumers and are vulnerable to abusive treatment by providers and their agents. Agents and agent networks introduce new risks, many of which are due to the physical distance between agents and the provider or the agent network manager and the resulting challenges to effective training and oversight and recourse mechanisms. This in turn introduces increased risk of fraud and theft, lack of transparency and abusive treatment of customers (including overcharging), poor cash management by the agent, and failure to handle customer data confidentially. Therefore, robust corporate governance is of great importance in institutions involved in digital financial inclusion, as it ensures responsible and sustainable services based on a culture that reinforces values such as sound risk management and the fair treatment of customers. Digital finance services providers and supervisors should be well informed and have good understanding of digital finance services business models, risk types, risk sources and risk exposures. With these inputs, supervisors will be able to set proportionate expectations of risk management strategies, policies and processes commensurate with the varying scale and complexity of operations, risk profile and systemic importance of different institutions.

The findings also stated that fraud or operation risks of digital financial services. For customers new to formal financial services and digital financial transactions, the lack of familiarity with the technology applications and the complexities of digital interfaces may result in customers sending value to the wrong mobile number or forgetting the security measures of the mobile device. Digital financial transactions often rely on electronic records and receipts which can sometimes present issues of availability and reliability due to interruption in the services. These may result in customers' lack of trust in the institution and its products, services, and/or channels. In addition, the use of agents as the primary customer interface, including to accept deposits and loan repayments and to enable withdrawals, introduces new operational risks and consumer protection risks in addition to the common outsourcing risks. Long distances between a financial institution and its agents can make oversight of agent actions difficult, introducing increased risk of fraud and theft, abusive treatment of customers, and failure to handle customer data confidentially. Policies and procedures governing the selection, training, and oversight of agents should be designed to address these risks. Therefore, in both the digital platforms as well as networks of agents, regulators must make it as clear as possible that the supervised institutions have the final responsibility to the supervisors and customers for, among other things, the protection of consumers' personal and financial information. Supervisors should have the authority to look into the implementation of service level agreements if deemed necessary and take action when there are risks arising from the non-implementation of certain provisions.

Basic infrastructure such as internet connection should be improved to expand the digital financial services in Myanmar. Digital financial services providers may be operating in areas that lack basic infrastructure or are prone to interruptions in the delivery of basic services. Disruptions in service may impact the provider's reputation and result in a loss of customer confidence not only in the specific company but also in digital delivery mechanisms. Financial institutions using digital platforms as the sole means of serving customers need business continuity measures to address the risk of disruptions in the platforms used.

REFERENCES

Agrawal, Gaurav & Jain, Pooja. (2019). *Digital Financial Inclusion in India*. 10.4018/978-1-5225-7399-9.ch011.

Agyekum, Francis & Locke, Stuart & Hewa-Wellalage, Nirosha, 2016. *Financial Inclusion and Digital Financial Services: Empirical evidence from Ghana,* MPRA Paper 82885, University Library of Munich, Germany, revised 15 May 2017.

Aziz, A., & Naima, U. (2021). *Rethinking digital financial inclusion: Evidence from Bangladesh.* Technology in Society, 64.

Consultative Group to Assist The Poor (CGAP) 2015. *Digital Financial Inclusion: Implications for Customers, Regulators, Supervisors, and Standard-Setting Bodies*. New York.

Datareportal (2023). *Digital 2023: Myanmar*. https://datareportal.com/reports/digital-2023-myanmar.

Ebong, J.; George, B (2021). *Financial Inclusion through Digital Financial Services (DFS): A Study in Uganda.* J. Risk Financial Manag.14, 393.

International Monetary Funds. (2021). *Is Digital Financial Inclusion Unlocking Growth?*

Kim, Dai-Won & Yu, Jung-Suk & Hassan, M. Kabir. (2017). *Financial Inclusion and Economic Growth in OIC Countries*. Research in International Business and Finance. 43. 10.1016/j.ribaf.2017.07.178.

Lee-Ying Tay,∗ Hen-Toong Tai, and Gek-Siang Tan (2022). *Digital financial inclusion: A gateway to sustainable development.*

Manyika et. al. (2016). *Digital Globalization: The New Era Global Flows.* Mckinsey Global Institute Report.

Md. Nur Alam Siddik and Sajal Kabiraj, (2020). *Digital Finance for Financial Inclusion and Inclusive Growth.* Springer Books, Springe.

Scout et. al (2017). *Long-term effect of digital innovation on bank performance: An empirical study of SWIFT adoption in financial service.* Research Policy, 2017, vol. 46, issue 5, 984-1004.

United Nation Capital Development Funds (2020). *Myanmar Financial Inclusion Roadmap 2019–2023.*

Xue Wang & Guangwen He, 2020. *Digital Financial Inclusion and Farmers' Vulnerability to Poverty: Evidence from Rural China*, Sustainability. MDPI, vol. 12(4), pages 1-18, February

World Bank. (2017). *Financial inclusion and Economic Growth*. New York.

World Bank (2020). *Digital Financial Inclusion*. New York.

Thank you for participating in survey on digital financial inclusion which will help us to understand roles of digital financial services in financial inclusion. The information you provided in this questionnaire will be used only for analysis purposes and will only provide as an average result to the public. No detail/ specific personal information will be disclosed.

1. What is your gender? (Please circle)
   - Male
   - Female
2. Which category below includes your age?
   - 18-20
   - 21-29
   - 30-39
   - 40-49
   - 50-59
   - 60 or older
3. Which category below includes your ***monthly*** income?
   - around 1-3 lakhs
   - around 4-7 lakhs
   - around 7-10 lakhs
   - around 11 lakhs +
4. What is the highest level of school you have completed or the highest degree you have achieved?
   - Hight school
   - Graduated
   - Post Graduated
5. Whether you have a bank account or not?
   - Yes
   - No

6. When did you started open the bank account? Please provide estimated year.

   …………………………………………………………………………………………………….

7. How many bank accounts do you have?

   ……………………………………………………………………………………………………..

8. Thinking about the FIRST account you opened, did you open it for any of the following reasons?

   - Saving money
   - For Business
   - Others (please clarify) …………………………………………………………………

9. If NO, why wouldn't you use bank account? Kindly provide the reason of why you don't have a bank account.

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   ………

   ………

   ………

10. Do you typically keep/save any money in your personal account(s)?

    - Yes
    - No

11. Do you have mobile data network access?

    - Yes
    - No

12. If yes, do you use any mobile banking or mobile money apps?

    - Yes
    - No

13. When did you start to use mobile banking or mobile money? Please provide the year.

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14. If no, why wouldn't you use mobile banking or mobile money account?

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15. If currently you don't have/ use mobile money, do you have any plan to use it in the future?

- Yes
- No

16. have you checked your account balance using a mobile phone or the Internet?

- Yes
- No

17. Have you personally used a mobile phone to make payments, buy things, or to send or receive money using a service?

- Yes
- No

18. Do you typically keep any money in your mobile money account?

- Yes
- No

19. Can you use your mobile money account by yourself without the help of another person or mobile money agent?

- Yes
- No

20. In the past 12 months, have you been saving money in any ways, whether or not you still have money?

- Yes
- No

21. If yes, any of the following ways,

- Saving cash at home or in your wallet?
- Giving money to family to save on your behalf
- Saving in an informal savings club?
- Paying money into a saving account.
- Saving money in your mobile money account such as Kpay, Wavepay.

22. What would be your daily money transaction, such as payment, bill, etc.…?

- Cash
- Digital payment

23. How often do you use digital payment such as Kpay, Wavepay in settlement/payment?

- Daily
- Often
- Rarely
- Never

24. Do you usually pay online or in cash when the order is delivered ?

- Pay online
- In cash
- Both

25. Which processes do you use for money transfer?

- In person transfer via banks (transfer with Name & NRC)
- Mobile money (such as KBZ pay, wave pay, OK dollar, etc.…)
- Mobile banking
- Informal sources such as express bus, trusted person, etc…

26. If you choose informal sources, why did you choose that way? Kindly provide your reason

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27. What are the most convenience things to use mobile money in payment/ transfer money?

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28. How do you think using mobile banking or mobile money have risks?

- Yes
- No

29. If yes, please provide specific risks which you encounter the most.

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30. Overall, I am

- Satisfied with Digital financial inclusion
- Concerned about Digital financial inclusion