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DIGITALIZATION, INNOVATION, AND FINANCIAL INCLUSION AMONG LEAP BENEFICIARIES: THE CASE OF ADA EAST DISTRICT AND LA NKWANTANANG MADINA MUNICIPAL

BY

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THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF A MASTER OF PHILOSOPHY (MPHIL) DEGREE IN POLITICAL SCIENCE.

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DECLARATION

I certify that this thesis, which was completed under the guidance of Dr. Joshua Zaato and Prof. Emmanuel Debrah, is an original work intended towards the attainment of a Master of Philosophy in Political Science. I also affirm that none of the material in this thesis has been submitted, in whole or in part, to any academic or professional degree-granting organizations. Every reference that was used in the work has been properly cited.

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DEDICATION

I dedicate this thesis to my family. The immense support during my hectic journey has seen me through this work and I am so grateful for all of you.

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LIST OF ABBREVIATIONS

AEDA	-	Ada East District Assembly
ATMs	-	Automated Teller Machines
BRICS	-	Brazil, Russia India, China and South Africa
E-government	-	Electronic Government
E-money	-	Electronic Money
E-wallet	-	Electronic Government
Fintech	-	Financial Technology
GCB	-	Ghana Commercial Bank
GDPs	-	Gross Domestic Products
HIV/AIDS	-	Human Immunodeficiency Virus/ Acquired Immunodeficiency Symdrome
ICT	-	Information and Communication Technology
ITU	-	International Telecommunication Union
LaNMMA	-	La Nkwantanang-Madina Assembly
LEAP	-	Livelihood Empowerment Against Poverty
MTN	-	Mobile Telephone Network
NFIDS	-	National Financial Inclusion and Development Strategy
OTP	-	One-Time Password
PIN	-	Personal Identification Number
SMEs	-	Small and Medium Scale Enterprises

ABSTRACT

The availability and use of financial services and products by all segments of the population is fundamental to global development. Nonetheless, more than two billion people globally said they lacked a formal bank account. Particularly for the underprivileged and marginalized, digital finance presents an opportunity to lower costs and provide access to a broad range of financial services. However, the lack of access to computers, smartphones, or the internet for financial transactions may result in even greater financial exclusion. Vulnerable groups and demographics, such as the elderly, the impoverished, and those living in rural areas, are further excluded due to the differences in access and use of these ICT tools. Hence, widens the disparity in financial inclusion. This study examines the impact of the digital divide on the adoption of digital financial services among a vulnerable group like the LEAP (Livelihood Empowerment Against Poverty) beneficiaries and explores measures government can take to mitigate the risk of a digital financial divide. Using a qualitative research approach, the study collected data through a semi-structured interview from respondents in the Ada East District and La Nkwantanang Madina Municipal. The study found that the digital divide significantly undermines the adoption of digital financial services among LEAP beneficiaries leaving them as passive users as they lack the enabling environment to engage with digital finance. The findings also suggested that the persistence of the challenges reflect not only resource and infrastructure constraints but also policy, lack of financial training and service design failures that continue to hinder adoption. The study concludes by recommending infrastructure development, digital literacy and capacity building, device accessibility and policy coordination as best way to promote the adoption of digital financial services among LEAP beneficiaries.

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Global development revolves around the accessibility and utilization of financial products and services by every population segment (Tia et al., 2023). One key development component is financial inclusion. Financial inclusion can be described as access to the use of formal financial products and services by poor households, low-income earners, smallholder farmers, and small businesses that hitherto were unserved (Ofosu-Mensah Ababio et al., 2021). A person is financially included when they have an account with any financial institution or a mobile money service provider, which allows payment and receipt of money (Demirguc-Kunt et al., 2017).

Financial inclusion has numerous benefits. For example, financial inclusion can help decrease poverty and inequality by allowing individuals to invest in the future and mitigate financial risks (Timbile & Kotey, 2022). Empirical studies have found that financial inclusion influences the economic performance of micro, small, and medium enterprises (Njanike & Mpofu, 2024). Furthermore, financial inclusion benefits society broadly by improving efficiency and reducing corruption (Demirguc-Kunt et al., 2017).

Yet, over 2 billion people worldwide reported not having an account (Demirguc-Kunt et al., 2017). According to Demirgüç-Kunt and Klapper (2012), less than one out of every four adults in Africa owns a bank account at any financial institution. Financial exclusion can be defined as a situation where individuals, households, and businesses have no engagement with mainstream formal financial institutions (Osei-Assibey, 2009). This implies that these categories of people are

unable to fully participate in economic activities. Hence, they lack safe and convenient institutions to conduct financial transactions (Osei-Assibey, 2009).

In most developing countries, the ability to save, borrow, insure, and invest has a direct effect on income (Twumasi et al., 2022). Therefore, low levels of financial inclusion in an economy increase the gap between the rich and the poor (Njanike & Mpofu, 2024). Addressing this challenge necessitates particular attention paid to specific aspects of the population historically omitted from formal financial services (Triki & Faye, 2013).

The increasing awareness of the returns of financial inclusion for national development has meant that inclusion has become an increasingly prioritized policy objective (World Bank, 2023). Governments, non-governmental organizations (NGOs), and private sectors worldwide are formulating and implementing strategies to broaden financial inclusion (Tia et al., 2023). This is due to its relevance to global development, eradicating poverty, and reducing inequality (Ofosu-Mensah Ababio et al., 2021; Tia et al., 2023).

The progression into the fourth industrial revolution has witnessed an unprecedented increase in connectivity and data flow (Ajambo et al., 2023). Information and communication technology (ICT) innovations such as mobile phones, the internet, and social media have made access to information better than ever before (Bahrini & Qaffas, 2019). Mobile devices have quickly evolved from just simply being devices for communication to sophisticated devices (Bahrini & Qaffas, 2019). Used in complex operations like bank transactions, borrowing money, bill payments, and receiving money, amongst others. With over 640 million mobile phone subscribers, Africa has become the second most connected region in the world regarding mobile subscription count (Faye & Triki, 2013). Given this huge mobile customer base and the absence

of an extensive brick and mortar bank network, technology is seen as a game-changer to outperform the traditional banking model (Faye & Triki, 2013).

Empirical studies, particularly those done in Africa, have touted financial technology (Fintech), otherwise known as digital finance solutions, as a way to reduce the percentage of the unbanked (Timbile & Kotey, 2022). In recent years, technological advances such as mobile money and the creation of new delivery channels, including mobile branches and banking services, have started playing an important role in providing greater financial access in Africa (Demirguc-Kunt, 2013). Digital finance offers a wide range of opportunities for cost reduction and expanding access to a wide set of financial services, especially for the excluded and underserved (World Bank, 2023).

Financial technology is an evolving innovation that aids financial services through digital mediums (Odei-Appiah et al., 2022). Digital platforms include the use of mobile money accounts, internet banking, Electronic money (E-money), debit or credit cards, mobile phones, or internet to make and receive payments (Demirgüç-Kunt et al., 2021; Ozili, 2022). The goal of Fintech (also known as digital finance) is to provide a range of digital financial services to all population segments (Ozili, 2022). Thus, promoting international efforts for universal access to digital identification and mobile phones could boost the account ownership of hard-to-reach population (Demirgüç-Kunt et al., 2021). Fintech also has the potential to democratize financial access (World Bank, 2023), and contribute to achieving the Sustainable Development Goals (SDGs) both directly and indirectly (Tay et al., 2022; Zetzsche et al., 2019).

There is little doubt about the potential impact of digital technologies on reconfiguring the flow of investment, goods, and services (Norris, 2001). However, there are many plausible reasons why the emerging internet age may reinforce disparities between the rich and the poor (Norris,

2001). The digital divide threatens to erode the contributions of digital finance to financial inclusion (Tay et al., 2022). The digital divide is the gap between those who have opportunities to access ICT tools and use the internet for various reasons and those who do not (Hargittai, 2003). Reports have documented the digital divide among women, people with lower incomes, ethnic minorities, rural residents, and uneducated people (Hargittai, 2003). Empirical studies have indicated that the adoption and use of digital finance are hindered by insufficient communications infrastructure and the absence of other essentials in rural sub-Saharan Africa (Adaba et al., 2019).

1.2 Problem Statement

Access to financial services allows individuals to manage risk, expand businesses, and improve the economic sustainability of the poor (Riley & Kulathunga, 2017). Globally, 76 percent of adults have an account at a bank or regulated institution (including mobile money providers), representing a 50 percent jump from 2011 to 2021 (Demirgüç-Kunt et al., 2021). New technologies such as mobile money, prepaid debit cards, and automated teller machines (ATMs) have helped broaden access to digital financial services (Demirgüç-Kunt & Klapper, 2013a; Kodom et al., 2022).

The rapid acceptance of digital solutions and technological revolution is transforming the financial sector landscape (Demirgüç-Kunt et al., 2021). By leveraging mobile technology, Fintech now extends financial services like insurance schemes, credit, and investment opportunities to the previously unbanked (Ajambo et al., 2023). Ensuring that the poor have access to and use basic financial services to raise income and improve their quality of life (Ajambo et al., 2023).

Today, Sub-Saharan Africa is the global leader in the use of mobile money, with 21 percent of adults having a mobile money account (Demirguc-Kunt et al., 2018). Ghana's financial

inclusion has substantially grown in recent years (Awal, 2022). In Ghana, 58 percent of Ghanaians have access to formal financial services (Demirguc-Kunt et al., 2018). However, despite these improvements, 42 percent of the population still lacks access to financial services (NFIDS, 2018). Vulnerable groups such as rural residents, women, the poorest quantile of the population, and youth still face financial exclusion (NFIDS, 2018).

Digital finance helped maintain economic activity during the COVID-19 pandemic (Ajambo et al., 2023). For example, state authorities and health officials encouraged the adoption of digital financial services to minimize physical contact and maintain social distancing (Tay et al., 2022). The disruptions caused by COVID-19 have (un-intendedly) accelerated the drive toward digitizing financial services (Tay et al., 2022).

The post-pandemic world has witnessed greater demand for Fintech solutions by governments, individuals, and businesses meant to increase global financial inclusion (Tay et al., 2022). Nevertheless, the pandemic may have also exacerbated pre-existing concerns about financial exclusion and introduced new dangers to financial inclusion (Sahay et al., 2020). Particularly concerning is the preexistence of the digital divide.

Maximizing the benefits of digital finance requires minimum technological capital (i.e., mobile phones, internet access) as well as human capital to use digital financial services (Sahay et al., 2020). The absence of mobile phones, computers, or the internet to conduct financial transactions could lead to further financial exclusion or divide (Sahay et al., 2020). Although ICT innovations have transformed economic and social life, the disparities in access and use mean that vulnerable groups and demographics, such as rural residents, the poor, and the elderly, are further excluded. Exacerbating the financial inclusion gap. Unfortunately, given the relative

inconspicuousness of digital infrastructures, their resulting exclusion of segments of the population risks going unnoticed (Odei-Appiah et al., 2022).

Ghana, in 2008, implemented a cash transfer program called the Livelihood Empowerment Against Poverty (LEAP) to provide financial assistance to underprivileged and vulnerable groups through cash grants (Foli, 2016). The LEAP program functions as a poverty reduction strategy was founded on the following objectives: lowering severe poverty, hunger, and starvation among the very poor; expanding access to and involvement in education for vulnerable and impoverished orphans under the age of 15; enabling caregivers to attain skills needed to move them out of poverty (Sackey, 2019).

Previous studies have broached digital finance and financial inclusion. For example, Osei-Assibey (2009) focused on the drivers of geographical financial exclusion. Ozili (2022), Parvin and Panakaje (2022), and Tinta et al. (2022) investigated the prospects, drivers, and challenges of digital finance to financial inclusion. Arday (2017) examined the effect of mobile technology on financial inclusion. Odei-Appiah et al. (2022), Sahay et al. (2020), and Tay et al. (2022) studied the prospects and dangers of digital finance post-COVID-19. Nevertheless, studies that incorporate the impact of the digital divide on Fintech adoption are scarce (Odei-Appiah et al., 2022; Wu & Peng, 2024). To address this gap, this uses the LEAP program as a qualitative interpretive case study to examine the extent to which the digital divide impacts the adoption of digital finance among LEAP beneficiaries. As well as explore how government can mitigate the risk of digital financial divide among LEAP beneficiaries.

Against this backdrop, this study seeks to examine the impact of the digital divide on the adoption of digital finance and how government can mitigate the risk of greater digital financial exclusion among LEAP beneficiaries.

1.3 Research Questions

The primary research question of this study is:

What is the impact of the digital divide on the adoption of digital finance?

The specific research questions are:

1. How does location impact the adoption of digital financial services?
2. Why have the challenges of digital financial inclusion persisted?
3. What measures can government adopt to mitigate the risk of a digital financial divide?

1.4 Research Objectives

The primary objective of this study is to examine the impact of the digital divide on the adoption of digital finance.

The specific research objectives are;

1. Explore how location has impacted the adoption of digital financial services.
2. Investigate the key factors contributing to the persistence of digital financial exclusion in Ghana.
3. Assess the measures government can adopt to mitigate the risk of a digital financial divide.

1.5 Relevance of the Study

Ghana has made great strides in its effort to improve financial inclusion. By leveraging digital technologies as a tool for a more inclusive financial landscape. However, the use of these technologies as modes of financial inclusion risks leaving behind vulnerable groups who have historically been underserved by the financial system. This study is timely because it throws light

on the pre-existing digital divide and how this digital divide has impacted the adoption of digital finance by these financially excluded groups.

This study contributes to the literature by filling the gap on the impact of the digital divide on the adoption of digital finance. This study also contributes to policy by exploring alternative policy measures that government can adopt to mitigate the risks of a digital financial divide. Furthermore, this study explores why the challenges of digital finance persist and how location has impacted the adoption of digital financial services. The findings of this study are also expected to bring some attention to the vulnerable groups who are left behind by digital financial platforms and mandate policies to remedy this divide.

1.6 Organization of the Study

This study contains five chapters.

Chapter one (1) includes the introduction, the problem statement, research questions and objectives, the relevance of the study, and the organization of the chapters.

Chapter two (2) contains the literature review. The conceptual framework highlights the conceptual underpinning of the study. The literature review section makes use of relevant articles, books, journals, and working and conference papers, among others, to discuss previous studies.

Chapter three (3) contains the conceptual framework. The conceptual framework highlights the conceptual underpinning of the study.

Chapter four (4) outlines the methodology to be used in this study. The methodology introduces the various research sampling techniques and strategies for conducting this study.

Chapter five (5) is dedicated to the data analysis. The data analysis involves interpreting the data collected to answer the research questions.

Chapter six (6) contains the summary of the findings, conclusion, and the key policy recommendations from the study.

CHAPTER TWO

INTRODUCTION

This chapter presents the literature from existing books, articles, journals, reports, working papers, and organizational websites. This chapter is made of four major themes. Themes of financial inclusion, digital divide, Fintech/digital finance inclusion and innovation, and LEAP are discussed below.

2.1 Financial Inclusion

Financial inclusion is a broad concept, leading to many varied definitions of financial inclusion (Demirguc-Kunt et al., 2018). Although there is no agreement on the definition, it is largely defined as ensuring people, especially disadvantaged groups, receive affordable and timely financial services from formal institutions (Nguyen, 2021; Sarma, 2008). Beck et al. (2015) define financial inclusion as the availability of reasonably priced formal financial services that cater to the needs of both households and enterprises. The aim of financial inclusion is to ensure that the unbanked are inducted into the formal financial system to access an extensive range of financial services (Hannig & Jansen, 2010). An efficient financial system provides avenues for offering savings, credit, and risk management opportunities to both individuals and businesses (Ackah & Asiamah, 2016). Especially as considerable evidence shows that the poor benefit from financial inclusion, which helps in the development and alleviation of poverty (Ackah & Asiamah, 2016). Usually, there is a focus on the poor, rural residents, and the uneducated with little to no financial literacy because most of them are financially excluded (Demirgüç-Kunt & Klapper, 2013b).

Limited financial inclusion threatens financial security and increases financial vulnerability, particularly among the poor (Kodom et al., 2022).

The pursuance of financial inclusion as a policy objective demonstrates the current recognition of financial inclusivity in development (Hannig & Jansen, 2010). Financial inclusion strategies have become an integral part of global effort to grow economies (Kodom et al., 2022). Ghana has made strides in achieving greater financial inclusion using innovative tools and strategies (Kodom et al., 2022). The adoption of supportive laws on financial inclusion and national digitalization initiatives has aided in the remarkable growth and extension of financial inclusion (Ofori-Acquah et al., 2023). For example, Ghana launched its official policy document on financial inclusion called the National Financial Inclusion and Development Strategy (NFIDS) in 2018. Today, financial inclusion is seen as a hallmark of economic advancement (Nguyen, 2021).

Nevertheless, it must be noted that the development of a financial system does not automatically translate to financial inclusion (Beck et al., 2015). Despite significant success chalked by microfinance institutions, credit unions, mobile money, and other innovations, many still remain unbanked, with an extensive gap in access to financial services across regions and key population segments (Hannig & Jansen, 2010; Ofori-Acquah et al., 2023).

2.1.1 Determinants of Financial Inclusion

Various studies have noted several factors of financial inclusion, which can be categorized into macroeconomic, socioeconomic, cultural, policy, and industry-specific factors (Kocenda & Eshun, 2023).

2.1.1.1 Macroeconomic Factors

Macroeconomic factors can affect financial inclusion. For example, Bashiru et al. (2023) alluded to the positive effect of financial globalization as a key driver of financial inclusion,

integrating the local financial system of countries into the global system. Evans (2015) argues that countries that record high economic growth and a high GDP per capita have greater participation of their citizens in the formal financial system. Similarly, Le et al. (2019) concurs with Evans (2015) that this view of financial inclusion is reflective of the global context, where high-income countries have 11% of adults who do not have formal accounts, while 76% of adults do not in the developing world.

Kocenda and Eshun (2023) point to inflation as another macroeconomic factor that influences financial inclusion. Studies like Yin et al. (2019) suggest a high inflation rate is inimical to financial inclusion, as it reduces capacity to save, while others like Evans (2015) argue that this effect is insignificant in regions like Africa. High public debt can impact the cost of credit and reduce government's ability to pursue financial inclusion programs (Damra et al., 2023). This has the overall effect of reducing financial inclusion. According to Bekele (2023), the percentage of rural population impacts financial inclusion. Thus, a high rural population increases transaction costs and discourages financial sector growth.

2.1.1.2 Institutional Factors

The importance of financial regulation and policy cannot be overstated. Countries with good financial regulation and enforcement have greater levels of financial inclusion (Pearce, 2011). Pearce argued that inappropriate financial regulation and supervisory framework would result in a financial sector that only serves a fraction of the financial needs, thereby fostering financial exclusion. Chen and Divanbeigi (2019) found that where country regulations are quality, individuals have a greater probability of owning an account at a financial institution than in countries with weak regulation. Allen et al. (2016) noted that stronger institutions, such as guaranteed legal rights and governmental stability, engender higher financial inclusion.

2.1.1.3 Socioeconomic Factors

Corrado and Corrado (2015) researched geography as a factor of financial inclusion in Eastern European states. Their study revealed that the chance of an individual using financial services hinges on not only on who they are but also their locality. Furthermore, Demirgüç-Kunt et al. (2022) identified additional factors such as education, age, gender, income, and locality as determinants of owning a formal financial account. Similarly, Soumaré et al. (2016) found the determinant of financial inclusion in Central and West Africa to be down to factors such as gender, residence area, employment status, and marital status. In China, Fungáčová and Weill (2015), using the 2012 Global Findex data, discovered that older, wealthier, and educated men were more likely to be financially included. Allen et al. (2016), just like Fungáčová and Weill (2015), using the Global Findex data, came to a similar conclusion that urban, employed, wedded, and educated persons were more likely to have an account with a formal financial institution. Furthermore, Asuming et al. (2019) came to a similar conclusion as both Allen et al. (2016) and Fungáčová and Weill (2015) by conducting a comparative analysis of financial inclusion in sub-Saharan African countries via data from the global Findex database. He established that individual-level elements such as age, education, gender, and wealth were substantial determinants of financial inclusion. Bashiru et al. (2023) assessed the drivers of financial inclusion in Sub-Saharan Africa between 2000 and 2017 using the dynamic panel approach. The findings revealed that rural population increments substantially reduced financial inclusion.

2.1.1.4 Industry-specific factors

The increase of banks and bank branch penetration has contributed to greater financial system development (Osei-Assibey, 2009). However, this development alone does not sufficiently address financial inclusion (Kocenda & Eshun, 2023). The introduction of mobile financial services presents a great opportunity to increase financial inclusion in Africa (Avom et al., 2023).

2.1.2 Measurement of Financial Inclusion

There is yet to be a consensus on the method to measure the level of financial inclusion in any economy (Nguyen, 2021). However, several scholars have attempted to use different methods to measure financial inclusion. One of the very early attempts to measure financial inclusion across several countries was by Beck et al. (2007). They proposed new metrics of bank sector services penetration based on service types. These included deposits, loans, geographic penetration, and demographic penetration. Other scholars like Honohan (2008) attempted to quantify the degree of financial inclusion by computing the percentage of adults who have access to bank services. Demirgüç-Kunt and Klapper (2012) developed indicators measuring borrowing, payments, savings, and risk management of adults worldwide. These sets of indicators were established through survey data from interviews with people of different nationalities.

Nevertheless, financial inclusion goes beyond indicators like the sum of bank branches, automated teller machines (ATMs), and the number of bank accounts owned by adults (Cámara & Tuesta, 2014). Nguyen (2021) noted that dependence on these indicators does not offer a full picture of the financial system of countries.

Several studies have attempted to develop the most appropriate measurement to weigh the extent of financial inclusion, also known as financial inclusion index (Nguyen, 2021). For example, Sarma (2008) identified three dimensions. They include availability of banking services, banking penetration, and usage. Similarly, Gupte et al. (2012) espoused four dimensions of financial inclusion: outreach, usage, cost of transactions, and ease of transaction. Nguyen (2021), however, proposed a multifaceted index, which is established by considering dimensions such as penetration, availability, and usage. This differs from Sarma (2008), which was limited to banks.

Nevertheless, Nguyen (2021) critiqued the suitability and adequacy of the existing financial inclusion indices, given that various scholars arbitrarily assigned weights to their indices.

Additionally, he also pointed to the absence of an important factor such as mobile money and other new technologies like Fintech in calculating financial inclusion indices, which casts doubt as to the accuracy of existing measurements.

2.1.3 Barriers to Financial Inclusion

There are many barriers to formal financial inclusion. For example, Soumaré et al. (2016) found the key hurdles to formal financial services in Central and West Africa to include liquidity challenges, high transaction costs of financial services, lack of credentials, and geographical location of financial organizations. Similarly, Amari and Anis (2021), in examining the barriers to savings and credit services in Tunisia, found that distance from banks, service charges, and absence of papers were the primary obstacles to financial inclusion.

Allen et al. (2016) collected data from 123 countries and over 124,000 people to under the barriers associated with account use among the financially excluded. They found that the main barrier to account use was a lack of money. Fungáčová and Weill (2015) analyzed financial inclusion in China in comparison to other Brazil, Russia, India, China and South Africa (hereafter BRICS) nations using the Global Findex data. Their study revealed that the decision to not have an account by Chinese is mainly a voluntary exclusion. Their findings differed from other BRICS countries where there was a prevalence of involuntary financial exclusion. Aterido et al. (2013) assessed the gender variances in terms of utilization of financial services across both households and businesses within Sub-Saharan Africa. They found that factors such as low involvement of females in the labour force and their level of education affect financial inclusion.

2.1.4 Trends and Gaps in Financial Inclusion Research

As noted, financial inclusion is a broader notion with varying conceptions by various scholars. The focus of financial inclusion research suggests a large number of articles have focused on the various measurements of financial inclusion, determinants categorized into macroeconomic,

socioeconomic, cultural, and policy, and hurdles to financial inclusion with linkage to individual factors like age, education, gender, and income. The realization that the development of a financial system does not automatically translate into financial inclusion necessitates efforts to find better ways of improving financial inclusion for all segments of a population.

The existing literature reveals gaps in the pre- and post-pandemic impact of COVID-19 on financial inclusion (Tay et al., 2022). This gap needs to be investigated further.

2.2 Digital Divide

Digital inequalities are a growing concern in the modern world (Lythreatis et al., 2022). The term digital divide gained popularity in the 1990s (Lythreatis et al., 2022). The digital divide was originally described the gap in access to a computer (Van Deursen & Van Dijk, 2010). Now, it refers to the differences in access, actual use, and use effectiveness of digital tools (Vassilakopoulou & Hustad, 2023). Despite the understanding and acceptance that ICT can be instrumental in resolving the economic, political, and social issues of the developing world, there remains information inequalities or the digital divide (Lythreatis et al., 2022; Ohemeng & Ofosu-Adarkwa, 2014). However, it must be noted that the phenomenon of the digital divide does not only exist in the emergent countries but in the advanced countries as well (Ohemeng & Ofosu-Adarkwa, 2014). The notion of the digital divide came from the United States in a writing called "Falling Through the Net" (Ohemeng & Ofosu-Adarkwa, 2014). The digital divide has thus continued to be a popular concern of policymakers, NGOs, and academics (Fink & Kenny, 2003).

2.2.1 Levels of Digital Divide

Fink and Kenny (2003) recognized the varied interpretation of what exactly the digital divide meant. They therefore posed four likely interpretations, (1) a gap in access to use of ICTs-which was calculated by the number and spread of computers and phones, (2) a gap in the capacity

to use ICTs- calculated by the skills base, (3) a gap in actual use- the time spent on telecommunication for various purposes, (4) a gap in the impact of use- calculated by economic returns. Norris (2001) on the other hand, categorized digital divide into three divides: the global divide between developed and developed nations; the social divide between the information rich and the information poor within countries; and the democratic divide between those in the online community who can participate in participate in public life using digital means and those who cannot. Keniston and Kumar (2003) posited the existence of four digital divides. According to them, the first divide exists within nations between the educated, the rich, and the poor; second, linguistics and culture, which separate people who can communicate in English and other Western European languages and those who do not; third is the growing gap between the rich countries and poor countries; and lastly, the rise of the new select group that benefit from the knowledge based sector of the economy, for instance, cutting-edge technology.

Ohemeng and Ofosu-Adarkwa (2014) pointed out that the digital divide can be considered within two contexts, that is, the international and domestic contexts. The degree of the digital divide between advanced and emerging countries is referred to as the international digital divide, while the gap within countries is considered domestic (Kenny, 2002). Again, Kenny (2002) observed that the subject of the international digital divide has enjoyed greater consideration relative to the domestic. Therefore, Brooks et al. (2005) assert that the gap between people who can utilize information technology and people who cannot is but one perspective. They argued that others, such as urban and rural, and rich and poor disparities exist. Similarly, the internal digital divide can be viewed from different perspectives, such as culture, age, economy, race, and gender (UNCTAD, 2006). Savić and Radojičić (2011) stated that the internal digital divide can be looked at according to social groupings such as gender, income levels, and educational levels. Importantly,

Ferro et al. (2007) observed that the digital divide is often studied as a relationship between information technology and a group of persons within society.

2.2.2 Determinants of the digital divide

The determinants of the digital divide represent any drivers of the digital divide, these include factors that exacerbate or diminish the digital divide (Lythreatis et al., 2022). Several studies have attempted to understand the root factors underlying the digital divide. There has been a continued debate on the factors for the digital divide, given that many scholars have grouped various factors differently (Myovella et al., 2021). For instance, Helbig et al. (2009) suggest the classification of three factors determining the digital divide in the literature. He named the first factor as the technology access approach, pointing to the dichotomy between the "haves" (people who have access to technology) and the "have-nots" (people who do not have access to technology). For example, the availability of infrastructure and related technology would determine the adoption and use of ICT. The second factor is the multi-dimensional approach. This approach speaks to the function of political, social, and organizational factors in influencing the use of technology. For instance, income and socioeconomic status. Lastly, the multi-perspective approach considers the combination of multiple factors, such as gender, class, age, and race, in shaping the user experience. Other scholars, like Scheerder et al. (2017), classified three levels of determinants of the digital divide. The first level is internet access, the second is internet skills, and the third level is the outcome of internet use. Van Deursen and Van Dijk (2010) challenged the initial binary definition of the digital divide (first level of digital divide), which was referred to as the variance between people who have and who do not have access to the computer and the internet. They extended the argument to include a skills divide to the use of the internet (second level of digital divide). Using an in-depth range of internet skills tests on sections of the Dutch population. They concluded that the physical internet access divide evolved into a divide of

differences in skills of use of the internet. Furthermore, the shift of focus from skills divide to the beneficial outcome of using the internet is what has come to be known as the third level of the digital divide (Van Deursen et al., 2017). Van Deursen et al. (2017) argued that this level of digital divide occurs when digital skills and use of the internet are unbeneficial to all persons. Although the fast penetration of mobile internet and devices has affected the conversation around the digital divide, Kolb et al. (2020) argue that the digital divide still exists but takes on a different form.

Individual factors affect the degree of the digital divide that exists; some of these factors include, for example, gross domestic products (GDPs). The GDPs of countries are a vital factor in determining the digital divide (Czernich et al., 2011; Van Dijk, 2012). Czernich et al. (2011) found a significant relationship between high GDP per capita growth and broadband penetration. They argued that people in developed nations may have better access to ICT services as compared to their less developed counterparts. Similarly, Fink and Kenny (2003) concur with Czernich et al. (2011) that an obvious divide exists between the per-capita income of developed nations and access to telecommunication and the internet compared to developing nations. Furthermore, Billon et al. (2009), in a cross-country study on the determinant of ICT dissemination using a canonical correlation analysis, concluded that high-income economies show greater levels of ICT diffusion, with the best explanatory variable being the GDP of advanced countries.

Dugdale et al. (2005) found that rural and remote Australians experienced a digital divide in access to online government services. The study concluded that the government should pursue a community-based human capital development system to drive a successful e-government agenda that improves service delivery. Similarly, a study by Parker (2003) found a significant digital divide between Maori (an indigenous group) and other New Zealanders in terms of access to the internet. The study opined that the divide was likely due to low educational levels and low

household incomes. Furthermore, Gauld et al. (2010) employed telephone interviews among the Australia and New Zealand population and found that a digital divide existed among older aged and less educated people; however, they found less statistically significant relationship for income levels.

In a focus group discussion involving young and elderly people in Italy, Pieri and Diamantinir (2010) found two significant factors that affected ICT use among the elderly. These were language (unavailability of native language) and memory (their ability to remember procedures in operating ICT tools). Thereby increasing the chance of a digital divide within the elderly population.

2.2.3 Trends and Gaps in Digital Divide Research

Research into the digital divide has been of concern since the 1990s. The digital divide research reveals that a large percentage of publications focused on the classification of levels and determinants of the digital divide. Mainly exploring the differences around the developed and developing countries, differences within countries, skill sets (demography, gender), infrastructure, and environmental factors such as locality. As governments worldwide implement e-government services, as well as private sector innovations such as Fintech introduce new digital financial products, concerns about the effect of the digital divide grow. Relative to the adoption and diffusion of these services to every facet of countries and not disadvantaging sections of the population.

The explanation of the digital divide has been fluid. Changing from the initial narrow definition of the gap in access to a computer to differences in access, actual use, and use efficacy of digital tools. The extant literature shows the gap in access was subject in every level of the study of digital divide while the gap in use is relatively underexplored (Srinuan & Bohlin, 2011). Therefore, this gap needs to be further explored. Furthermore, most studies have employed

quantitative methods to try to answer digital divide research questions. Nevertheless, qualitative methods, particularly interviews, would deepen the understanding of the digital divide. Given that it affords target groups to provide further information and insight that a quantitative approach may lack.

Also, most research has focused on differences in the context of individuals, households, and country level without much attention on the comparative differences between geography (locality). To fill this gap, this study aims to understand how the digital divide has impacted the adoption of digital financial services in rural and urban localities.

2.3 Fintech/Digital Finance Inclusion and Innovation

2.3.1 Overview of Digital Financial Inclusion

Digital finance depicts the digitalization of financial systems (Gomber et al., 2017). Ozili (2022) defines digital financial inclusion as ensuring the entry of unbanked adults into the financial system by offering financial services to unbanked adults utilizing digital devices such as mobile phones, tablets, and laptops, among others. Alternatively, he defines digital financial inclusion as the delivery of inexpensive digital services targeted at including the poor in the formal financial system. In comparison with financial inclusion, digital financial inclusion relies on technology to expand access to financial services (Tay et al., 2022). The aim of digital financial inclusion is to offer opportunities to every segment of the population, especially the poor, to access funds, save funds, and grow capital, among others (Ozili, 2022). Digital finance can provide access to banks and their products in areas that otherwise may not have access (for instance, rural and remote areas) (Gomber et al., 2017). Therefore, digital financial inclusion aims to remove barriers to boost involvement in the financial system (Tay et al., 2022).

It is important to note that banks, nonbanks, and financial technology companies can all offer digital financial services (Ozili, 2022). Digital finance typically includes blockchain and cryptocurrency, electronic payments, and e-commerce, among others (United Nations, 2022).

2.3.2 E-money and Digital Payments

Although the vision of a digital economy is still in a nascent stage, it is quickly developing due to the advent of new technologies and innovations (Riley & Kulathunga, 2017). The high penetration rates of social media and mobile phones have come to define the contemporary world (Tay et al., 2022). Innovations such as mobile applications, internet banking, mobile money, payment cards, and e-wallets have increased electronic payment avenues (Ozili, 2022; Riley & Kulathunga, 2017). The rapidly increasing digital payment systems are making payments faster, affordable, and safer (Riley & Kulathunga, 2017). Thereby decreasing some of the barriers that accompany traditional financial transactions and increasing financial inclusion. Additionally, Demirgüç-Kunt et al. (2021) opined that digital payments can expand financial inclusion among groups such as farmers and perhaps increase their chances of using additional financial options such as credit and insurance.

2.3.3 Studies on Digital Financial Inclusion

Rasheed et al. (2019) studied the role of digital microfinance in improving access to finance for small- and medium-scale enterprises (SMEs) in Pakistan. Through secondary data, the study found that digital microfinance products helped managers of SMEs in better management and enhancing access to finance. Aziz and Naima (2021) explored the impact of digital finance on financial inclusion among minority populations. They noted that although the availability of digital financial services has improved financial inclusion, such services have been underutilized because of the absence of financial literacy, connectivity, and social awareness. Shen et al. (2020) studied the means through which China can achieve financial inclusion using a partial least squares

approach. They found that financial inclusion can be realized through the improvement of the financial literacy of individuals as well as the promotion of digital financial services. Bachas et al. (2018) studied how digital financial services can reduce the transaction costs for Mexican citizens. They found that debit cards, for example, lessened the transaction costs by decreasing the distance to access bank accounts.

Despite the numerous advantages touted by various scholars, Mader (2018) challenged the prevailing assumption of the causal link between financial inclusion and economic development. He argued that the evidence of poor people directly benefiting from financial inclusion interventions is weak. Similarly, Loubere (2017) critiqued the dominant narrative of digital financial inclusion by drawing examples from the case of China. He argued that the exploitation of digital financial coverage in China could expand the surveillance of citizens and may pose dangers such as the reproduction of inequality and exploitation of certain groups of citizens. Bateman et al. (2019) questioned the popular narrative around the design and creation of Fintech. They argue that digital finance is in the hands of a few global elites who are behind digital finance and that the ultimate beneficiaries are those elites who shift the risks of digital finance to the poor. Bartlett et al. (2022) examined how discrimination in consumer lending among certain groups persists even on digital financial platforms. In other words, digital finance failed to eliminate historical discrimination in the United States.

2.3.4 Barriers to Digital Financial Inclusion

Simatele and Maciko (2022) identified demand-side factors such as the lack of employment, low income, financial literacy, and trust as significant barriers to digital financial inclusion through focus group discussions in rural South Africa. The study proposed the creation of an enabling environment for digital services, such as mobile money, to achieve greater inclusion in rural communities. Similarly, the World Bank (n.d.) identified several demand-side barriers,

including restrictive sociocultural gender norms surrounding women's education, employment, and ownership of mobile devices. Furthermore, the World Bank also highlighted a lack of financial education and digital literacy, inadequate formal identification documents, and unequal access to technology as key impediments to digital financial inclusion. Anakpo et al. (2023) investigated the state of digital financial inclusion in developing countries. They found challenges such as lack of digital infrastructure and services, inactive users of financial services, challenges in detecting excluded populations, and the lack of cooperation by banks as the impediments to the extensive use of digital financial services. Tay et al. (2022) studied how COVID-19 changed the face of digital financial services and promoted sustainable growth. Conducting a systematic review, they found that a divide formed between various social groups such as rich and poor, gender, and urban and rural areas in terms of access and use of digital financial services.

Ozili (2022) presents some challenges and risks to digital financial inclusion, including the rising cost of digital tools for example, laptops and mobile phones, as well as the increasing cost of internet connectivity, data privacy and data security concerns, and increasing incidence of fraud. Thus, scholars like Zaato (2024) suggest that regulatory and legislative reforms must be adapted to fit the local conditions of countries to promote digitalization and innovations such as digital finance.

2.3.5 Trends and Gaps in Digital Finance Research

Digital finance is seen by some scholars as a strategic tool for enhancing financial inclusion. Research into digital finance suggests a large percentage of studies have focused on benefits, demand and supply-side barriers to digital finance inclusion, and regulation of digital finance (World Bank, n.d.). Digital finance is seen to hold the potential of bridging the variance between those with access to formal financial services and those without through the use of modern technological innovation.

The extant literature reveals gaps in disaggregated data on gender and urban and rural financial needs and financial behaviour. Therefore, this gap needs to be further explored. Furthermore, most studies have employed quantitative methods to arrive at answers on digital finance research. Nevertheless, the adoption of a qualitative method, such as interviews, would provide a deeper understanding of issues related to digital finance. Given that the target population might provide broader insight compared to a quantitative approach. This study aims to address the gap in disaggregated data on urban and rural financial needs and financial behaviour by exploring why the challenges of digital financial inclusion persist in both localities.

2.4 Livelihood Empowerment against Poverty (LEAP)

The government of Ghana introduced the LEAP program in 2008 (Debrah, 2013). The program makes bimonthly cash transfers to extremely poor and vulnerable persons (Debrah, 2013). The policy had two sets of beneficiaries. The first group comprised the aged, physically challenged, unemployed, and children orphaned by HIV/AIDS (Debrah, 2013). The others include small businesses such as petty traders, fishermen, peasant farmers, and artisans (Debrah, 2013). The main objective, according to the Ministry of Gender, Children, and Social Protection website, was to decrease poverty among the extremely poor and vulnerable by boosting consumption and increasing access to services and opportunities (MoGCSP, n.d.).

Since 2013, the LEAP program transitioned its payment mode to electronic payment system (LEAP, n.d.). Three payment service providers were contracted in the distribution of the grants: MTN Mobile Money, AYA Technologies, and the Ghana Interbank Payment and Settlement Systems (GhIPSS), also known as E-Zwich (LEAP, n.d.). These digital payment platforms provide numerous digital financial services (other than payment of grants). This study

explores how the government can leverage the LEAP program to increase access to digital financial services and bridge the digital divide among these vulnerable populations.

CHAPTER THREE

3.1 Theoretical Background

Ozili (2020) presents three broad categories of financial inclusion theories, namely, theories of financial inclusion beneficiaries, theories of financial inclusion funding, and theories of financial inclusion delivery. Under the umbrella of the beneficiaries of financial inclusion, the vulnerable group theory of financial inclusion argues that targeted financial inclusion projects should be aimed at the vulnerable, such as young people, the elderly, women, and poor people (Ozili, 2020). Limantė and Tereškinas (2022) conceptualize vulnerable people as those disadvantaged economically, politically, or socially.

Since financial inclusion is a well-known development consequence, it is possible to establish a relationship between financial inclusion and vulnerable groups (Ozili, 2024). Therefore, the vulnerable group theory of financial inclusion is based on this perceived relationship (Ozili, 2020). The theory argues that vulnerable people often are the most impacted by financial crisis, and therefore, efforts should be made to bring such people into the formal financial sector (Ozili, 2020). Ozili (2020) suggests that one way to achieve this to achieve this, is for government to institute government to person social cash transfer that requires vulnerable populations to create formal accounts to access funds. Thereby, implying financial inclusion initiatives should be targeted at vulnerable populations to lift them out of this "bracket". The application of the vulnerable group theory of financial inclusion allows for a nuanced understanding of the impact of the digital divide on the adoption of digital finance.

3.1.1 Merits and Demerits of the Theory

Ozili (2020) outlines some benefits. Firstly, he emphasized that the theory attempts to reduce financial exclusion. Also, it is a cost-effective solution as compared to the public good theory, where financial inclusion initiatives apply to the entire population.

For the demerits, Ozili (2020) noted that the theory was discriminatory. Such that, it only considers the vulnerable. Secondly, it ignores those in the non-vulnerable group who might also be outside the formal financial sector (Ozili, 2024).

3.2 Conceptual Framework

A conceptual framework can be described as a product of qualitative processes of theorization of interlinked concepts that provide an understanding of a phenomenon (Jabareen, 2009). Imenda (2014) interprets conceptual frameworks as a product of the blend of extant literature on a particular event. Thus, a conceptual framework provides an understanding of a particular phenomenon, employing interrelated concepts sieved through the existing literature. Unlike a theoretical framework that applies a theory to explain an issue (Imenda, 2014), a conceptual framework leans on a visual or written product to explain the relationship between variables or concepts (Huberman & Miles, 2002). Furthermore, Aliu et al. (2021) noted that conceptual frameworks are constructed based on the perspective of the researcher regarding a particular problem. They argue that this is done to refine the researcher's goals and the suitability of methods in the conduct of the study.

This study situates the impact of the digital divide on the adoption of digital financial services among LEAP beneficiaries within the context of financial inclusion. Especially as the drive towards a digital economy continues to be pronounced. The study draws on reviewed sub-themes from the literature review such as the determinants and barriers to financial inclusion to

inform variables within the conceptual framework. For example, a socioeconomic factor like locality (rural/urban) is adapted to be the moderating variable of the study. Again, barriers such as education, infrastructure, and lack of money informed the choice of the independent variables. In light of this, the study utilizes these key constructs and categorizes them into independent, dependent, and moderating variables to underpin the framework of the study. These constructs are operationalized within the context of the study's research objectives.

3.3 Independent Variable

3.3.1 Government Intervention

Direct government interventions are conceptualized as actions undertaken by the government to improve access to and use of digital financial services. Three policies are considered, including infrastructure development such as expanding internet connectivity to all regions and corners of the country. Subsidies on technological devices and mobile devices to make them affordable to poorer segments of the population (LEAP program beneficiaries). Digital literacy programs to increase knowledge and skills in using digital financial service platforms. These actions are expected to have a positive influence on digital financial inclusion. These policies and programs form the independent variable of the study.

3.4 Moderating Variable

3.4.1 Location

The place of residence (locality) is treated as a moderating variable. The geographical context of LEAP beneficiaries is expected to influence the relationship between government interventions and the adoption of digital finance. Brooks et al. (2005) argued that rural and urban disparities exist. Urban areas and residents, in this case La Nkwantanang Madina Municipal, have

better internet services and greater exposure to digital technologies. Rural areas and residents, in this case, Ada East District, on the other hand, are typically underserved, have limited internet connectivity, and lower literacy levels. The prevailing conditions in both areas mean that direct government interventions may have a stronger effect in urban areas, whilst these interventions may have a weaker effect in rural areas.

3.5 Dependent Variable

3.5.1 Digital finance

Digital financial inclusion is conceptualized as the extent to which people within both Ada East District and La Nkwantanang Madina use digital platforms for financial activities as a result of government interventions. For instance, frequent digital transactions, the use of digital savings accounts, digital investments, digital loans, and insurance. It is treated as a dependent variable, an outcome of the actions of government.

3.5.1.1 Diagram of Conceptual Framework

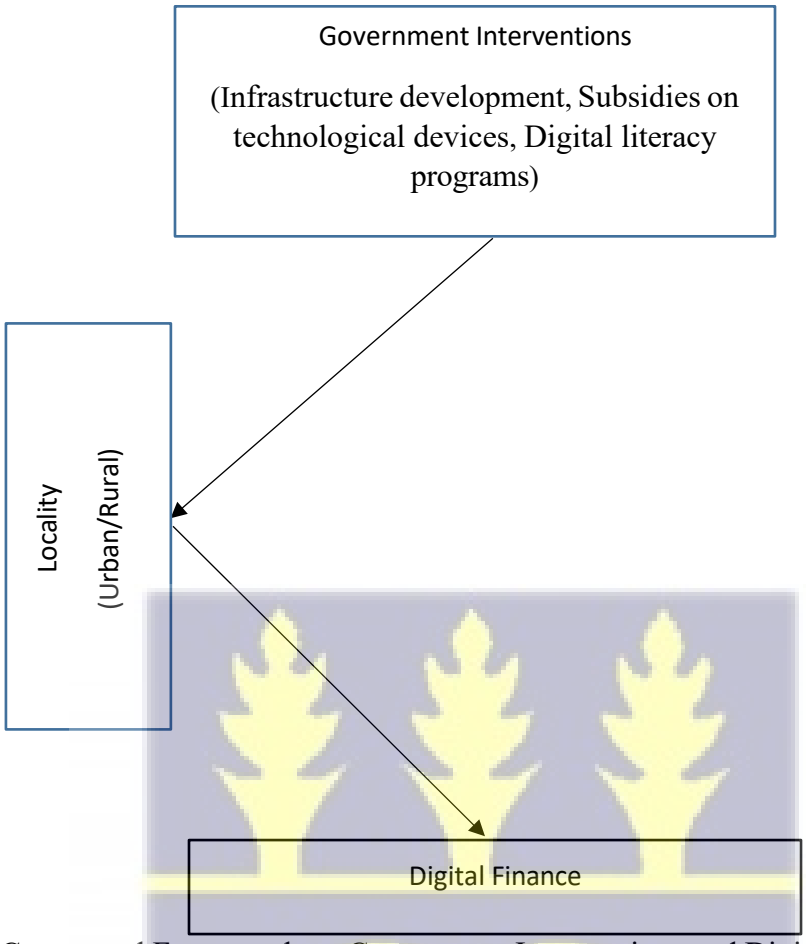


Figure 1.1: Conceptual Framework on Government Interventions and Digital Financial Inclusion

Source: (Author, 2025)

3.6 Assumptions of the Framework

The conceptual framework is built on a few key assumptions that guide the study.

Firstly, governmental interventions stimulate change. The framework assumes that the shift towards digital finance among LEAP beneficiaries would be primarily driven by deliberate government policy actions and programs.

Secondly, infrastructure and literacy levels vary significantly between locations. It is assumed that the availability of digital infrastructure (i.e., network and electricity) as well as the levels of digital literacy among LEAP beneficiaries are substantially different in the two locations.

Thirdly, LEAP beneficiaries are rational actors. The framework assumes that beneficiaries will adopt digital finance if the necessary enabling environment, such as available network, mobile devices, and digital literacy, and barriers to adoption are removed by governmental intervention.

This framework, with its defined variables and underlying assumptions, provides a comprehensive lens for understanding how government programs, influenced by geographical location, impact the adoption of digital finance among LEAP beneficiaries. It provides the basis for data analysis.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

This part explains the methods utilized to study the research and the rationale behind specific designs and procedures. Additionally, it defines the environment in which the study was conducted. The chapter also covers philosophical paradigm, sampling method, data collecting tools, data collection procedures, analysis, validity and reliability, research constraints, and ethical considerations.

4.2 Philosophical Worldview

According to Guba (1990), a paradigm is a set of basic belief systems that determine what inquiry is and how it should be practiced. Cresswell (2013), however, defined a paradigm as a general perspective that a researcher has on the world and the nature of research. He believed that this influences the researcher's choice between a qualitative, quantitative, or mixed methods approach in their research. He proceeded to point out four distinct worldviews: post-positivism, constructivism, advocacy, and pragmatism (Cresswell, 2013). However, positivism and interpretivism are viewed as the traditional philosophical paradigms (Adom et al., 2016). The post-positivist school argues that knowledge is grounded in absolute truths that can only be obtained through objective means (Miller, 1972). While the constructivist school asserts that the study of the social world is essentially separate from the natural sciences, which necessitates a study methodology that takes into account the unique characteristics of people and their institutions (Bryman, 2016).

This study adopted the constructivist paradigm. This paradigm allows the researcher to understand the world by engaging people familiar with an issue, leading to a comprehensive understanding of how the digital divide impacts the adoption of digital finance among LEAP beneficiaries in Ghana.

4.2.1 Constructivism

Crotty (1998) argues that constructionism rejects the view of human knowledge, stating that there is no objective truth waiting to be discovered. Therefore, knowledge is the outcome of human construction (Guba, 1990). Cresswell (2013) stressed that researchers look for the complexity of views, given that individuals develop subjective meanings of their experiences to better understand a research problem. Bryman (2016) pointed out that, in constructivism, the researcher does not give a definitive view of social reality; rather, there is the presentation of a particular version.

Constructivism makes some assumptions (Cresswell, 2013; Crotty, 1998), which include: one, meanings are formed by individuals based on their engagement with the world they are interpreting. Therefore, qualitative researchers ask open-ended queries for respondents to share their point of view. Two, individuals engage with their world based on their historical and social perspectives. Three, the basic generation of meaning is always social due to engagement with a human community.

4.3 Research Approach

Generally, there are three main research approaches: qualitative research approach, quantitative research approach, and mixed-method research approach. This study adopts the qualitative research design because it aimed to gather in-depth information and understanding of

human behaviour (Nizam & Rashidi, 2025), in this case, the impact of the digital divide on the adoption of digital finance among LEAP beneficiaries.

4.3.1 Qualitative Research Approach

Qualitative research is a scientific inquiry that emphasizes context and perspective that offer unique interpretations of social phenomena (Lim, 2025). This method of inquiry collects data in the natural setting of the area of study and employs inductive data analysis to establish themes (Cresswell, 2013). Neuman (1997) pointed out that in a qualitative study, there is heavy reliance on interpretive social science, where there is consideration of cases, context, and cultural meaning. Furthermore, he stated that there was emphasis on conducting detailed examinations of particular cases in social life.

4.4 Research Design

A research design, as defined by Bryman (2016), refers to the framework set out by the researcher for the collection and analysis of data. The research design is the logical sequence that connects the empirical data to a study's initial questions and finally to its conclusion (Yin, 2003). There are five commonly employed strategies to collect and analyse data, which include narrative research, grounded theory, phenomenological research, ethnography, and case studies (Neuman, 1997). The case study design is used for this study.

4.4.1 Case Study Design

A case study is one of the types of qualitative methods of inquiry. It involves a detailed and intensive analysis of a case (Bryman, 2016). A case study entails the research of an issue explored through one or more cases within a bounded context or setting (Cresswell, 2013). It reveals the complexities of a phenomenon within a real-world setting (Lim, 2025). Case studies

allow for observational and descriptive analysis focused on documenting and understanding a particular issue (Lim, 2025).

According to Yin (2003) and Baxter and Jack (2008), case studies are appropriate for studies focused on answering "how" and "why" questions. Some data collection sources for case studies include interviews, observations, documents, audiovisual material, and reports (Cresswell, 2013). The study adopted the case study method of inquiry to gain an in-depth understanding of how the digital divide impacted the adoption of digital finance among LEAP beneficiaries. The study employed a comparative case study design to explore the subjective reality of digital financial exclusion and to allow for direct comparison of two cases to identify patterns and difference.

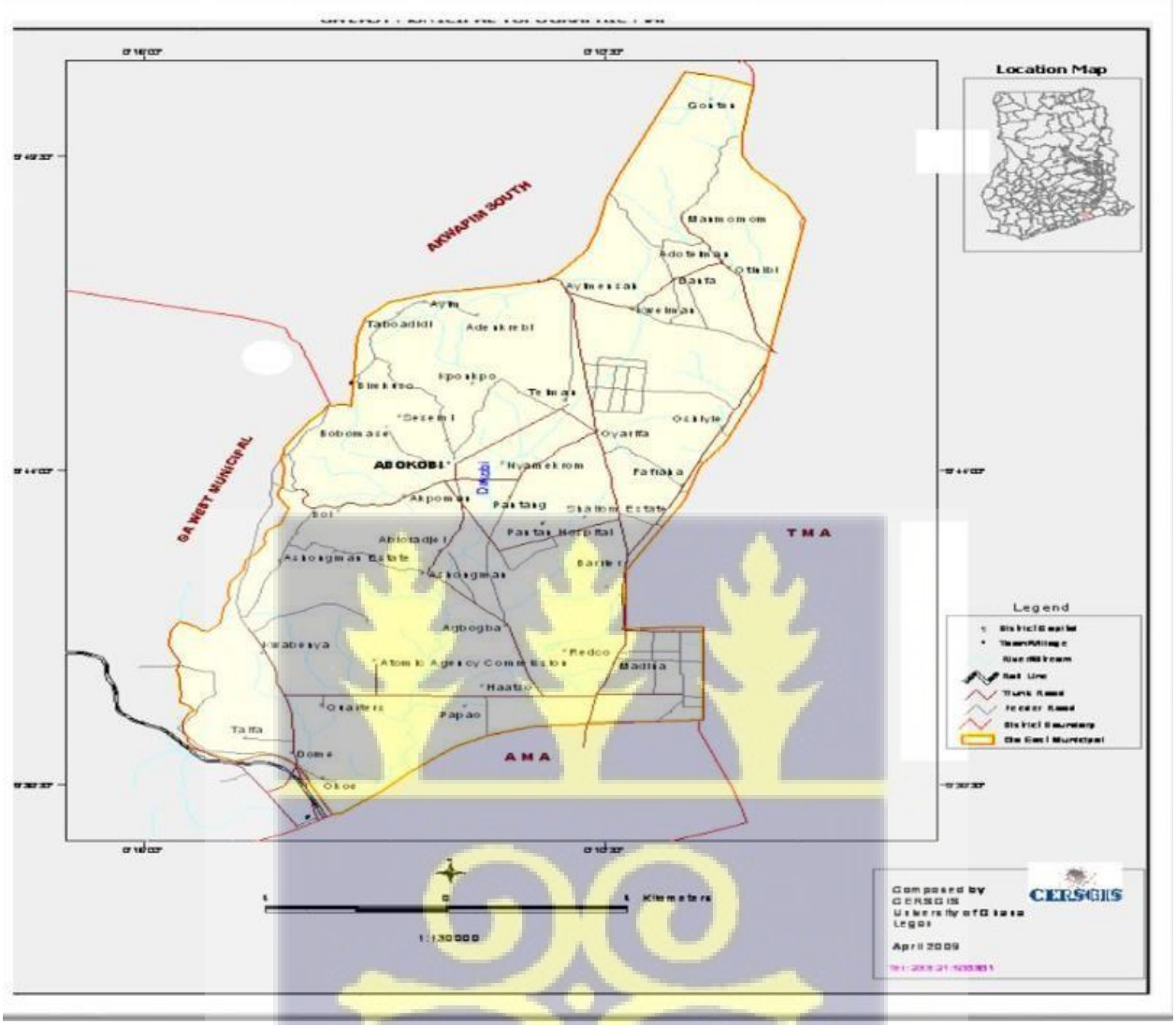
4.4.2 Profile of Study Areas and Population

The La Nkwantanang-Madina Municipal Assembly (LaNMMA) was established on 15th March, 2012 by an LI 2131 (LaNMMA Service Charter, 2018). The assembly was formed from the Ga East Municipal Assembly. It is located in the northern part of the Greater-Accra Region and situated between Latitude 5 ° 81'3^{11} N and Latitude 5^{o} 67^{1} 7^{11} N, between Longitude 0 ° 24^{1} 0^{11} W and 0^{o} 13^{1} 1^{11} W (LaNMMA Service Charter, 2018). It has one of the sixteen Metropolitan, Municipal, and District Assemblies in the Greater Accra Region and covers a land Area of 166 sq km (LaNMMA Composite Budget, 2018). It is bordered to the West by the Ga East Municipal Assembly, to the East by the Adentan Municipal Assembly. The Assembly shares a boundary to the South with Ayawaso West Assembly and to the North and North-East with Akwapim South District and Kpone-Katamanso Municipality, respectively (LaNMMA Service Charter, 2018).

According to the composite budget document for 2018, LaNMMA is a mainly urban Municipality with pockets of rural settlements, which are quickly developing into peri-urban

settlements (LaNMMA Composite Budget, 2018). LaNMMA has a population of 244,676 residents, with 120,846 males and 123,830 females (GSS, 2021). The municipality has 84.6% of people living in urban localities, while 15.4% live in rural settlements (GSS, 2021). According to the City Population website, the demographic spread for the population includes 69,280 being in the age group of 0-14, while 167,215 make up the age group of 15-64 years, and 8,181 make up the over 65 years age group (City Population, n.d.). On the literacy front, 91% of the population is literate while 8.1% of the population is illiterate (City Population, n.d.-b). The study took place specifically in Oyarifa, a town in the La Nkwantanang Madina Municipality. The study area is shown in Figure 2.1

Map of La Nkwantanang-Madina Municipality

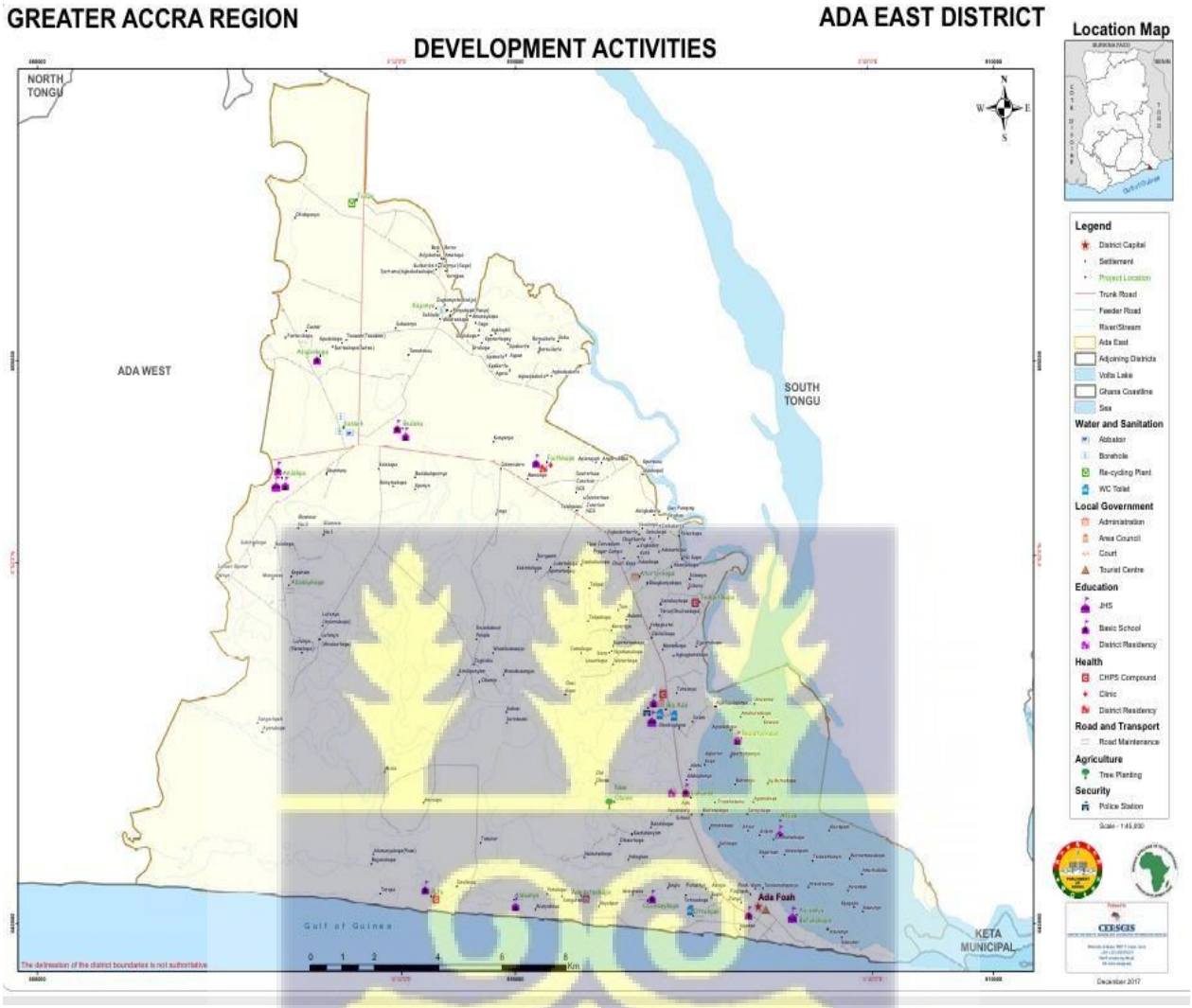


Source: (CERGIS, 2012, cited in LaNMMA Composite Budget, 2018)

The Ada East District Assembly (AEDA) was established in June 2012 by L.I. 2130 and the capital town, Ada-Foah (AEDA Composite Budget, 2023). According to the AEDA website, the district was formed from Dangme East and is situated in the Eastern part of the Greater Accra Region (AEDA, n.d.). It can be located between Latitude 5º 45`S and 6º 00`N and Longitude 0º

20 'W and 0º 35`E and covers a total land area of 289.78 square km (AEDA Composite Budget, 2023). The district shares common boundaries with Central Tongu District to the North, South Tongu District in the Volta Region, the Ada East and Ada West Districts to the West of Greater Accra (AEDA Composite Budget, 2023). The Ada East District has a population of 76,411 residents, with 37,034 males and 39,377 females (GSS, 2021). The district has 64.9% of people living in rural localities, while only 35.1% live in an urban settlement (GSS, 2021). According to the City Population website, the demographic spread for the population includes 27,871 being in the age group of 0-14 years, while 44,390 make up the age group of 15-64 years, and 4,150 make up the 65 and older age group (City Population, n.d.). Also, 69.6% of the population is literate, while 30.4% are illiterate (City Population, n.d.). The study took place specifically in Kasseh, a town in the Ada East District. The study area is shown in Figure 2.2

Map of Ada East District



Source: (AEDA Composite Budget, 2023).

Taking into consideration the contrasting demographic characteristics of both areas, the study chose these two locations to provide a comparative, more nuanced understanding of the factors that either facilitate or hinder digital financial inclusion among LEAP beneficiaries. Such that, the finding would not only shed light on the realities of each area but also allow for comparative analysis of commonalities and differences between the two areas.

4.5 Sampling

O'Leary (2004) defined the sample population as the total membership defined by a categorization of people or events. The success of any study would depend upon the suitability of the sampling technique (Ahmed, 2024) in reducing the total sample population. Kirner and Mills (2019) defined sampling as a way of depicting the broader world through a small population that one studies. Daniel (2011) described sampling as the selection of a subgroup of a population for the composition of a study. According to Singh and Masuku (2014), the main merit of sampling is lower cost, and it enhances the pace of data collection. Thus, Daniel (2011) warns that if not done properly, the findings of a study may have little scientific and practical value.

4.5.1 Sampling Procedure

The sampling techniques adopted to accomplish the objectives of the study were purposive sampling. Purposive sampling is a non-probability sampling technique. Daniel (2011) defines non-probability sampling as a procedure that does not afford some elements of the target population a shot at being sampled. In explaining purposive sampling, Guest et al. (2013) stated that purposive sampling is where the researcher selects study participants according to the reason for their participation in the study. Kirner and Mills (2019) described purposive sampling as the definition of the purpose of participants to participate in a study, and then including all participants who are willing. This non-probability sampling procedure was adopted for this study because it allowed the researcher to include participants who had specific, relevant insight about the research problem. Daniel (2011) pointed out, however, that this method may potentially introduce imprecision in the researcher's selection of participants, leading to sampling bias. Given the inherent difficulty in accessing vulnerable populations like LEAP beneficiaries, the sampling process necessitated the reliance on institutional intermediaries (Municipal Assembly as well as LEAP focal person in the case of La Nkwantanang and District Assembly in the case of Ada East) for initial contact. To

mitigate potential selection bias associated with this reliance, the researcher ensured the following procedure was followed: Independent consent was secured from all participants, and interviews were conducted privately, away from the presence of officials, thereby soliciting candid and confidential viewpoints.

4.5.2 Justification for Sample Composition

The study aimed to include distinct categories of participants to ensure that diverse stakeholders from civil society, academia, beneficiaries, government authorities, and the private sector are fairly represented and their perspectives and insights captured in the study's analysis and conclusions. The total number of participants for the study was sixteen (16). This group is depicted as follows: nine LEAP beneficiaries: four (4) from rural and five (5) urban areas. One (1) caregiver. They were strategically chosen because of their unique insights. The justification for their selection is as follows.

Nine LEAP beneficiaries and a caregiver. These are the primary subjects of the study. Their direct experiences with digital financial services are central to answering the research objectives of the study. Having the beneficiaries from both urban and rural areas ensures that their perspectives and accounts of their experiences are captured. The caregiver was added because they are aids to LEAP beneficiaries and sometimes handle the beneficiary's interaction with digital finance. Therefore, their insights are valuable in understanding the impact of the digital divide on the adoption of digital finance among beneficiaries.

An official from the LEAP management secretariat under the Ministry of Gender, Children, and Social Protection. This respondent offers a high-level policy perspective on the national strategy for LEAP and policy decisions regarding digital finance and the national vision and strategy for digital finance.

Two officials from the social welfare of the Ada-East District. These officials are crucial because they oversee the LEAP program's implementation at the local government level. They can shed light on the administrative processes and the specific challenges faced within the district in their interaction with LEAP beneficiaries regarding digital finance literacy training and other interventions.

A focal person of the La Nkwantanang Madina Municipal. This individual is the local, ground-level administrator of the program. He can provide detailed information on the day-to-day implementation of the program and the challenges of technology use and interventions at the local level.

An official from Inclusion Ghana. Civil society often has direct interactions with beneficiaries and often advocates for their rights. This respondent can provide insight into the policy gaps on the ground and can provide compelling alternatives for policy directions for greater digital financial inclusion.

A banking expert. A banking expert provides the financial and private sector perspective. They can explain the challenges of digital services and the products and options available to increase digital financial inclusion among LEAP beneficiaries.

A political scientist from the Department of Political Science. A political scientist can provide the perspective of academia. The political scientist can also analyze the perspective of political factors on the LEAP implementation and how it relates to digital financial inclusion efforts.

Thus, these sixteen (16) individuals were deemed to represent the point of saturation for the sampled population when the researcher realized that no new analytical theme emerged from adding more participants.

4.6 Data Collection Process

O'Leary (2004) makes the case that primary data is current data wholly owned by the researcher and targeted to a specific problem the researcher explores. She noted that the most common primary data collection methods were through surveys and interviews; however, she did not leave out observation. According to Walliman (2011), primary data collection often entails collecting data by observing, recording, and measuring the activities of real people or events. This study chose interviews as the primary data collection method. Eriksson and Kovalainen (2008) defined interviews as consisting of talk organized into a series of questions and answers between an interviewer and interviewee. The study employed a semi-structured interview. A semi-structured interview involves a pre-determined set of open-ended questions prepared beforehand but allows for improvisation and follow-up questions based on responses from participants (Myers & Newman, 2007). Walliman (2011) defined a semi-structured interview as one that contains structured and unstructured sections and open-format questions. The semi-structured interview was adopted for this study because of its flexibility and allowance for in-depth probing into understanding the impact of the digital divide on the adoption of digital finance among LEAP beneficiaries. Additionally, there was two pilot tests conducted with petty traders within the University of Ghana that helped to refine and fine tune the interview questions.

4.6.1 Framework for Data Analysis

Qualitative data analysis is the interpretation of linguistic or visual content to make statements about implicit and explicit dimensions of content and what it represents (Flick, 2014). Cresswell (2013) indicated that qualitative data analysis is the condensation of large data into themes through coding for final presentation into tables, figures, or discussion. O'Leary (2004) points out that qualitative analysis follows a logical underlying process of organizing raw data; entering and coding data; searching for meaning through thematic analysis; interpreting meaning, and drawing conclusions. The framework for data analysis adopted by this study was qualitative content analysis. Qualitative content analysis centers on language (communication) with attention to the contextual meaning of text (Hsieh & Shannon, 2005). The choice of this approach was influenced by Flick's (2014) claim that qualitative content analysis was the most prominent way of reducing and coding complex data. Thus, the qualitative content analysis approach was used to compare data obtained from the field to the extant literature to establish trends and points of convergence and divergence. The process explicitly followed the open, axial, and selective coding to ensure themes were inductively derived from the linguistic content of the interview.

4.7 Ethical Issues

Ethics in the context of research refers to the provision of guidelines for researchers and the establishment of enforcement mechanisms to ensure ethical research (Aguinis & Henle, 2004). Informed consent, respect for confidentiality, anonymity, and privacy are among the ethical codes for the conduct of research (Smith, 2003). In strict adherence to these ethical codes, an introductory letter from the Department of Political Science of the University of Ghana was given to the target respondents. This letter stated the purpose of the study and sought consent and availability of the respondents for interview sessions. Additionally, prior to the interview sessions, the respondents'

consent was obtained. The confidentiality and anonymity of the respondents were maintained. Furthermore, to protect respondents' privacy, the report did not include their names or contact details.

4.8 Limitations of the Study

The choice of employing a case study seems to be a limitation of the study. A smaller and more specific sample population limits the generalizability of the findings. However, it is important to note that this restriction in no way diminishes the reliability and validity of the study's conclusions.

4.9 Conclusion

This chapter described the study's research methods. It offers explanations for the selection of employing a qualitative research design, sampling technique, study areas, and case study approach. It also stated the use of semi-structured interviews as the primary data collection instrument and the employment of a qualitative content analysis as a framework for the data analysis. Finally, the chapter touched on the ethical issues and some limitations.

CHAPTER FIVE

DATA PRESENTATION, ANALYSIS, AND DISCUSSION

5.1 Introduction

This chapter presents the results of the data collected during the interviews. This chapter discusses and analyzes the data meant to answer the research questions and the objectives. The chapter details the perspectives of the respondents. The data was analyzed using the framework of digital financial inclusion among LEAP beneficiaries in Ghana. A total of 16 interviews were conducted with various stakeholders, through a semi-structured interview with LEAP beneficiaries and a caregiver, a LEAP focal person, staff of the social welfare at the district, an official of the LEAP management secretariat under the Gender Ministry, civil society, and a banking expert. The interviews were accurately transcribed. The results are organized based on the stated objectives of the study which are: to examine the impact of the digital divide on the adoption of digital finance among LEAP beneficiaries; to assess how location impact the adopted of digital financial services in among LEAP beneficiaries; to investigate why the challenges persist; and explore measure can government can adopt to mitigate the risk of a digital financial divide.

5.2 The Digital Divide and the Adoption of Digital Finance Among LEAP Beneficiaries.

The first objective of this study was to gain insight into the extent of the digital divide through the respondents' perspective on how it has impacted their adoption of digital financial services. The views articulated were indicative of the challenges to the adoption of digital finance among LEAP beneficiaries. From the data collected, the following themes have been deduced:

5.2.1 Limited Digital Literacy

To gain insight into the extent of the digital divide in terms of skills or the ability to use digital services, it was imperative to gauge the level of digital literacy. Beneficiaries in both districts were asked about their highest educational level, how confident they were in using digital technology, and whether they had received any digital literacy training. The study showed that majority of the respondents had up to a junior high school education, with only one having a secondary education, and others having none. Interestingly, all the beneficiaries interviewed said they had never received or been involved in any digital literacy training program.

5.2.1.1 Elderly beneficiaries lack formal ICT education

It is particularly interesting to note that only one out of the nine LEAP beneficiaries interviewed from both the Ada district and the La Nkwantanang Madina municipal had a secondary education as their highest educational attainment. This beneficiary is a 72-year-old trader in the Ada East district. She intimated the difficulty in using digital financial services. She expressed that her advanced age makes it difficult for her to be familiar with modern digital innovations. In her own words, she said:

> "Because in our time of schooling, they don't train us on this digital and now we are old" (Field Note, 2025).

Similarly, in 94 year old male LEAP beneficiary and a retired hospital worker said that he could not use other digital financial services like using online payment platforms, or internet banking other than mobile money unless he was trained before he would be able to use it. Indicating willingness to learn to adopt digital financial services.

5.2.1.2 Young beneficiaries and access to formal ICT education

A community focal person for LEAP beneficiaries in the La Nkwantanang Madina, while answering a question on beneficiaries of government support related to digital access, stated that:

> The government has taken out the orphans, those who were recruited, and sent them to SOS...it is a school in Tema. So, we sent them there to go and learn. So, they have been given these laptops, computers, and all those things for them to learn. And then, our first batch has arrived this year. (Field Note, 2025)

He further noted that:

> "We also sent some to social welfare in the school, also to go and learn...for ICT training, other vocational skills, and all those things" (Field Note, 2025).

5.2.1.3 Women beneficiaries and access to ICT training

An official of the LEAP management secretariat, while responding to a question on beneficiaries of government support related to digital access, mentioned a piloted project across 4 districts (Saboba, Bosa South, South Tongu, and North Tongu) involving 560 plus female LEAP beneficiaries. He stated that the project had two-fold objectives: productive inclusion and digital financial inclusion for beneficiaries. The 560-plus female beneficiaries were trained in productive activities as well as sensitized on digital financial inclusion. He mentioned that the project was called Digital Financial and Productive Inclusion Project, spanning between 2022 and 2024. Fully funded by World Food Program in partnership with LEAP management secretariat. However, this was only a pilot.

5.2.1.4 Rural beneficiaries and access to ICT training

A head official of the social welfare department at the district assembly at Ada, in response to a question on any government intervention related to digital access, said:

> When it comes to these rural areas, mostly people are not well educated...sometimes training is being organized for the caregivers or the beneficiaries to come over and help as to how to handle, how to use the E-zwich card to access their money. (Field Note, 2025)

However, a political scientist from the Department of Political Science, University of Ghana, classified the training in the rural areas as "a bit limited". Suggesting that there was no official training mechanism. Often relying on the courtesy of the LEAP officials in trying to help, most often the elderly people, making the training subjective and not comprehensive. In his words, he said:

> The whole idea of this training has been limited, most often to rural areas...and the LEAP officials most often do not actually have the patience to train them in that capacity. One aspect of it also has to do with discretion. (Field Note, 2025)

Furthermore, he had this to say about the digital training programs in urban areas:

> "When it comes to urban centers or peri-urban centers, it is already assumed that these people know" (Field Note, 2025).

A banking expert with eight years' experience in Microfinance in the Ada-East District noted that he only had knowledge of NGO's that organize digital trainings for LEAP beneficiaries in their communities. However, stated that he had no idea about any such digital training programs for LEAP beneficiaries by government.

5.2.2 Dependency on relatives or caregivers for transactions

A 73-year-old female LEAP beneficiary and retired trader resident in Oyarifa avers that she does not own or use any digital financial service account herself. She stated that at her age, her head and her eyesight prevent her from engaging with digital financial services. Hence, she does not own a phone. She stated that she was completely dependent on her daughter for any such digital financial service needs, like mobile money. She said:

> "I depend on my daughter's phone...only my daughter uses mobile money" *(*Field Note, 2025).

Another 74-year-old female LEAP beneficiary and trader resident in Oyarifa with no educational background said that:

> "I use yam phone, but even this one I don't know how to use it. They type the numbers for me. But if someone call me, I can receive it" *(*Field Note, 2025).

In response to a question on whether she used any digital financial services like mobile money. She responded in the affirmative. Therefore, the interviewer asked a follow-up question on how she uses mobile money, given that she could not read or write. She responded by saying:

> "It's my children that help me to use it" *(*Field Note, 2025).

5.2.3 Limited Device Ownership

To gain insight into the extent of the digital divide in terms of device ownership for the use of digital financial services. It was essential to gauge the type of digital devices LEAP beneficiaries owned or regularly used. Beneficiaries in both districts were asked about the digital devices they owned or used. The study showed that majority used basic phones, commonly referred to as yam phones, while others did not own any personal device at all. None owned a smartphone, a tablet, or a laptop.

5.2.3.1 Use of basic phones restricts access

A 72-year-old female LEAP beneficiary and trader resident in Ada Foah, in answering a question on the type of digital devices she owned or regularly used, said:

> "I am just having the yam phone" *(*Field Note, 2025).

Similarly, a 74-year-old male, a 67-year-old male, and a 64-year-old female LEAP beneficiary, all residents in Oyarifa, also responded to the same question by saying they only owned a yam phone.

5.2.3.2 Absence of ownership of personal device

An 80-year-old female and a 63-year-old female, both residents of Ada, responded to the question on the type of digital devices they owned or regularly used by saying they had no phone. However, the 63-year-old female said that she depended on her caregiver's phone for everything. In her words, she said:

> "I do not have a phone. So, if anything they send through my caretaker's line" (Field Note, 2025).

The 80-year-old, on the other hand, said that:

> "No phone...one of my kids bought me a phone, but I have lost it and haven't gotten anyone to buy some for me" *(*Field Note, 2025).

In Oyarifa, a 73-year-old female LEAP beneficiary said she depended on her daughter for any mobile money needs.

A political scientist at the Department of Political Science, University of Ghana, noted a trend where people with mobile devices rely on other people's phones to gain access. He said:

> "Some don't even have phones. They use other people's mobile money accounts. So, they are like oh, I'll apply with my cousin's mobile money account, my nephew, my auntie" (Field Note, 2025).

5.2.3.3 Technological Barriers

To gain insight into the extent of the digital divide in terms of the technological barriers, it was necessary to gauge the technological hindrances that prevent the utilization of digital financial services. Beneficiaries in both districts were asked about the main technological barriers that hindered their utilization of digital financial services. Their answers revealed that they had issues with network stability and biometric failures on E-zwich machines.

5.3.1 Network instability

The network forms a significant component of the use of the digital service. A 72-year-old female LEAP beneficiary resident in Ada Foah complained about the network, saying that the network affects the availability of the vendors. She said:

> "Sometimes when you go too the network, the vendors are not there regularly" (Field Note, 2025).

The caregiver for the 63-year-old female LEAP beneficiary had this to say about the network:

> "Here, it is only the network problem" (Field Note, 2025).

A staff member of the social welfare in the Ada-East district gave credence to the issue about network availability:

> "I would say in rural areas, because of the unavailability of networks, it impeded the ability to access financial or digital financial services" (Field Note, 2025).

A head official at the social welfare in the Ada-East district described accessing the network at times to be very difficult in rural areas. He gave this example:

> "My phone is a practical example...I am trying to load, you know, it's not going. I'm trying to forward money, it's not going" (Field Note, 2025).

The LEAP focal person for La Nkwantanang corroborates what all the other respondents said about the network challenge by saying:

> The challenges are the network system. We are talking about Greater Accra. We have some areas where there is no network... part of Abokobi in the capital, if you want to access your WhatsApp, you can see that there is no network. (Field Note, 2025)

5.3.2 Biometric failures on E-zwich

An 80-year-old female LEAP beneficiary reported that the E-zwich machine fails to capture her fingerprint, making it difficult for her to access her money. She explains that:

> Sometimes when we put our hands on the E-zwich machine, it does not pick it. The other day when they said the money came and I went there, they said the fingerprint was not picked up by the machine. So, I should go and come another day. (Field Note, 2025)

Furthermore, she faced another frustrating hurdle when she went on another day.

> "Another day when I went, they said the machine had developed a fault, so they sent it to be fixed" (Field Note, 2025).

Another beneficiary, a 63-year-old trader and LEAP beneficiary resident in the Ada-East district, said that she was discouraged by the back and forth over the renewal of her expired card. She said:

> "The only thing that discourages me is that before April, that the money came, my card got expired and I went to the bank several times to renew but I am unable to still get it" (Field Note, 2025).

Cost barriers

A 64-year-old female LEAP beneficiary complained about the hurdle of travelling to the bank to access LEAP funds through the E-zwich. She said that had added an extra cost to her. She said:

> Initially, when they would give us the money, they brought it here to us. But now we go to the bank to access it. We now have to pick a car to get there. With this my legs crossing

the footbridge, meaning dropping fee would have to come in before I can get there. (Field Note, 2025)

Disabled beneficiaries and access to digital financial services

An official of Inclusion Ghana stated that there were a lot of people who do not benefit from digital financial services. He provided instances where disabled individuals are disadvantaged in the use of digital financial services. He said:

> "You can talk about little people. So if you have an ATM and they cannot reach it. They are people who do not get access to these ATM machines" (Field Note, 2025).

For the blind, he said, their needs are not included in these arrangements:

> Those who are blind, if you go to the ATM machine you are supposed to have a tactile (braille) on the ATM so they know this is number three, this is number four...otherwise it does not give independence of the blind man redrawing their own money. (Field Note, 2025)

Voluntary exclusion

Amongst all the beneficiaries interviewed. A 67-year-old male farmer and LEAP beneficiary said he voluntarily preferred not to use a digital financial service like mobile money and expressed his dislike for it. In his words:

> "I do not use mobile money...I prefer not to use it. When I am not using it, there is nothing wrong...I have never registered it. I never liked it" *(*Field Note, 2025).

5.3 Location and its Impact on the Adoption of Digital Financial Services

The second objective of this study was to gain insight into how location impacts the adoption of digital financial services. The views expressed were indicative of the location, whether urban or rural, impacts the adoption of digital financial services among LEAP beneficiaries.

5.3.1 Urban Advantage

To gain insight into how location in the urban area impacts the adoption of digital financial services, it was imperative to gauge the viewpoint of stakeholders on the advantages of the urban area that promote the adoption of digital financial services among LEAP beneficiaries.

5.3.1.1 Early access to programs and infrastructure

According to a political scientist from the University of Ghana, location has a great impact. He illustrated this advantage by pointing out that people living in urban areas and rural areas would not have the same internet connectivity. He said:

> "A person living in Kokomlemle in the city and a person living in maybe Zabzugu, a small town in the northern part of Ghana, would not have the same internet connectivity"(Field Note, 2025).

Furthermore, he said this about the infrastructure in the urban centers:

> "The infrastructure, the whole internet or network infrastructure within urban centers are solid" *(*Field Note, 2025).

An official of the LEAP management secretariat backs this claim about the network, saying:

> Obviously, somebody in the city has access to, for instance, as I mentioned, you can be using Airtel Tigo, and Telecel at the same time or MTN and any of them. Some of the rural areas you go you will not even find one of these networks. (Field Note, 2025)

Similarly, a head official at the social welfare in the Ada district alluded to the fact that urban is far better given that there are devices that you can get there (urban centers) to easily access information, unlike rural areas. He said:

> "You have all the sophisticated devices and other digital machines that are out there in the urban areas" (Field Note, 2025).

The focal person for LEAP in La Nkwantanang explained that because urban areas have lots of people, their needs are attended to faster than those in rural areas. He said:

> "We will talk about social amenities like water, internet cafe, and all those things. When we go to the urban areas, we will get to them. When we come to the rural areas, we do not get them" *(*Field Note, 2025).

A staff member at the social welfare in the Ada-East district stated that:

> People in the urban areas, they don't have network as a challenge that much than those in the rural areas. You know those telecommunications they focus on the urban areas than rural areas. They invest more in the urban areas. (Field Note, 2025)

A 73-year-old female LEAP beneficiary also alluded to this advantage, stating that:

> "Big towns are big towns. So, when they want to do anything, they think about them first before they think about the rural" *(*Field Note, 2025).

5.3.1.2 More information service points and banking options

A political scientist at the University of Ghana and a banking expert both expressed similar views on the availability of more financial institutions in urban areas. The political scientist had this to say:

> "Most banks are in the cities...rural areas must travel far" (Field Note, 2025).

The banking expert put it differently:

> "I think most of the banks are located in the, let's say the cities, and it's a challenge" (Field Note, 2025).

An official of Inclusion Ghana argued that people in urban areas have faster and varied information sources as compared to their rural counterparts. He said:

> "Obviously, the urban people will hear about any digital training program than rural people. The urban people have access to platforms that likely government is going to share some of this information rather than rural areas" (Field Note, 2025).

5.3.1.3 Rub-off effect

A community focal person for La Nkwantanang stated that the exposure from using the banking system will mean that urban LEAP beneficiaries will be more likely to be enlightened on the use of digital financial services as compared to rural areas. In his words:

> "Those in the urban areas, as they use the banking system, they are more enlightened than those in the rural areas" (Field Note, 2025).

A political scientist at the University of Ghana's Department of Political Science argued that LEAP beneficiaries in the urban centers have an advantage over those in the rural areas because adapting to digital payment becomes a survival skill. He said:

> LEAP beneficiaries in urban centers have an advantage over those in rural areas because of these digital platforms, the ability to use it. I mean, once you are in the city, it rubs off on you. Because people selling even water, they have people paying them through mobile money. So, this is an advantage. (Field Note, 2025)

5.3.2 Rural Disadvantage

To gain insight into how location in the rural area impacts the adoption of digital financial services, it was imperative to gauge the viewpoint of various stakeholders on the disadvantages of the rural area that impact the adoption of digital financial services among LEAP beneficiaries.

5.3.2.1 Scarce financial service points

A 72-year-old female LEAP beneficiary in the Ada district laments that the limited options in terms of service points affect them. She noted:

> "It is just one place in the community...you go too, they say the machine has spoilt, so you sit down you do not get anything" (Field Note, 2025).

A banking expert in the Ada-East district noted that most banks were located in the cities, making access to financial services for people living in the rural areas difficult. He said:

> "It's a challenge to those people around the villages and communities where they can be able to have access to their banks" (Field Note, 2025).

A political scientist at the Department of Political Science, University of Ghana, indicated that due to the unavailability of banking institutions in some rural areas, LEAP officials collaborate with banks to go to these areas to help LEAP beneficiaries access their funds comparing the situation to the urban areas like Madina, where people can just walk into any bank and get their money. He stated that:

> Sometimes these LEAP officials go there with even banks for once the money is paid, then the banks would withdraw for them immediately just there so that they can keep the money because if they leave, there's no way that these people will be able to withdraw the money. But someone in Madina just walks into any bank and then they get their money. (Field Note, 2025)

An official of Inclusion Ghana re-echoes this point, he said:

> "The rural-urban divide is a problem. In rural areas, you don't have so much of digital financial systems. You find a bit more local rural banks who may not even have ATMs" (Field Note, 2025).

A staff member at the social welfare department of the Ada-East District lamented the limited availability of financial institutions at Ada. She said:

> "The financial institutions are very far from the people here and a lot of banks aren't in the districts. We have the rural bank and then GCB, which is far from them" (Field Note, 2025).

5.3.2.2 Transport costs to access services

On the transportation front, a banking expert noted the challenges of travelling long distances to the bank only to return empty-handed. He said:

> Someone can travel all the way from a far distance, thinking he or she is coming to be able to have access to the small money that they're taking, but they can't, because there is a network problem at the bank. (Field Note, 2025)

5.3.2.3 Delayed rural program implementation

An 80-year-old female LEAP beneficiary at the Ada-East district highlighted the non-uniformity in the implementation of programs at the national level. She perfectly captured the issue of implementation delay when she said:

> "The fact that we are a rural area and they are an urban area. It is from the urban area that these things come to us over here" (Field Note, 2025).

5.4 Why the Persistence of the Challenge?

The third objective of this study was to gain insight into why the challenges persist. The views expressed were indicative of the reasons for the persistence of the challenges related to the adoption of digital financial services among LEAP beneficiaries.

5.4.1 Infrastructure deficiency

To gain insight into why infrastructure deficiency continues to hinder the adoption of digital financial services. It was imperative to engage the point of view of various stakeholders on why the infrastructure deficit persists.

5.4.1.1 Poor network connectivity

A community focal person for LEAP at La Nkwantanang Madina pointed out that a person can own a smart device yet be unable to access digital financial services when the network connectivity is poor. He said:

> "If a person has a smartphone, he can access digital financial services. But if there is no network, he cannot access it" (Field Note, 2025).

A staff of the social welfare at the Ada-East District simply stated that:

> "These challenges continue to exist because of network challenges" (Field Note, 2025).

5.4.1.2 Lack of basic social amenities

A community focal person for LEAP at La Nkwantanang Madina stated that there are some rural areas where there is no electricity. Therefore, if a person gets a mobile phone, powering that phone becomes a problem. In his words:

> "A lot of places in the rural areas. There is no electricity over there. So, if the person gets a smartphone or mobile phone, to charge it becomes a problem. So, how do they gain access?" (Field Note, 2025).

5.4.1.3 Lack of local banking facilities

A 64-year-old female LEAP beneficiary lamented the lack of banks and E-zwich machines in her area, saying that she has to travel to Madina to get access. In her words:

> "Because there is no banking hall here, and there is no E-zwich machine operating here. So, everything you have to travel to access" (Field Note, 2025).

5.4.2 Economic constraints

To gain insight into economic constraints that impact the adoption of digital financial services, it was imperative to gauge the viewpoint of various stakeholders on how economic conditions continue to affect the adoption of digital financial services among LEAP beneficiaries.

5.4.2.1 Poverty limits device purchase

An official of the LEAP management secretariat stated that one needs to have the financial means to purchase a mobile device. He said:

> For you to be able to access the network, you need the mobile device; without the mobile device, you cannot, and you need money to acquire the device so if you do not have money, you will not have the device (Field Note, 2025).

Similarly, a political scientist at the Department of Political Science, University of Ghana, stated that the LEAP grant was too meager for beneficiaries to buy a device with. He said:

> "Even the money is too small for them to even think of buying devices" (Field Note, 2025).

5.4.3 Policy Gap

To gain insight into why the policy approach hinders the adoption of digital financial services. It was imperative to engage the viewpoint of various stakeholders on why the existing policy challenges persist.

5.4.3.1 Inconsistent government intervention and non-institutionalized training

A banking expert in the Ada East district indicated that he only knew of NGOs that organize digital training for LEAP beneficiaries. He said:

> "I know of one NGO that mostly organizes training for these LEAP people...I don't have any idea about government organizing training. I know they are NGOs" (Field Note, 2025).

A political scientist at the Department of Political Science, University of Ghana, waded in by pointing to how it was left to the discretion of LEAP officials to train LEAP beneficiaries on how to use digital services. In his words:

> "It also has to do with discretion. So, out of courtesy and respect, they try to provide this kind of training to them, which are most often elderly people" (Field Note, 2025).

Nevertheless, a head official at the social welfare at the Ada-East district indicated that some training is organized for beneficiaries and their caregivers. There was, however, no timeline given for these trainings. Implying a non-institutionalized training system. In his words:

> Mostly the people are not well educated...so they are being directed and then the caregivers, sometimes training is being organized for the caregivers or the beneficiaries to come over and help as to how to handle, how to use the E-zwich card to access their money. (Field Note, 2025)

Additionally, none of the beneficiaries responded in the affirmative when they were asked whether they received any ICT training.

5.4.3.2 Wrong policy design approach

An official at Inclusion Ghana questioned the policymaking approach of government. He argued that right from the start, the policy design approach has always been flawed. He noted neglect of important stakeholders, stating that only a select few sit in their offices and design policy interventions which would not work, classifying it as a knee-jerk approach to policymaking. In his words:

> You cannot do financial inclusion without telcos, without financial institutions, civil society. These are the people who engage the community members all the time. So, our design of interventions are always flawed...We use more knee-jerk approaches. Like, oh this is a brilliant idea let's do it...The people are the ones using it, how do you know whether you are meeting them halfway or full? (Field Note, 2025)

5.4.3.3 Weak monitoring and evaluation system

Again, an official at Inclusion Ghana lamented the weak monitoring and evaluation system. Arguing that there must be a moment of self-reflection to see what we have done. Where there is the question of how it went? He said:

"There must be a moment to self-reflect, so we have done this. How did it go? So, I guess the monitoring and evaluation system is not strong in most of these interventions that we are rolling out" (Field Note, 2025).

5.4.4 Technology design limitations

An 80-year-old female LEAP beneficiary complained about the challenge of the E-zwich machine to capture and verify her fingerprint to allow her access to her money. She explained this technological limitation in her own words:

Sometimes when we put our hands on the E-zwich machine, it does not pick it. The other day when they said the money came, and I went there, they said the fingerprint was not picked up by the machine. So, they said I should go and come another day. Another day when I went, they said the machine had developed a fault, so they sent it to be fixed. And honestly, I have not been feeling well, so I have not been able to get back there again. (Field Note, 2025)

5.4.5 Lack of financial training

A political scientist at the Department of Political Science, University of Ghana, argued that LEAP beneficiaries most often lacked financial education or, as he put it, "a financial mindset" for investment and savings, skills which are critical for onward digital training in utilizing digital financial services. He said that the lack of financial training is a persistent hindrance to efforts at promoting the adoption of digital financial services.

5.4.6 Personal choice of voluntary exclusion

An official of the LEAP management secretariat pointed out the challenge continues to persist because some individuals choose not to explore the opportunities of digital financial services. He said:

"Some, the opportunity may be there, but they may not also be exploring" (Field Note, 2025).

5.5 Measures Government can Adopt to Prevent the Risk of a Digital Financial Divide

The fourth objective of this study was to gain insight into measures government can adopt to advert the risk of a digital financial divide. The views expressed were indicative of the reasons for the persistence of the challenges related to the adoption of digital financial services among LEAP beneficiaries.

5.5.1 Infrastructure expansion

To gain insight into a solution like infrastructure expansion, to enhance adoption of digital financial services. It was imperative to engage the point of view of various stakeholders on what must be done on infrastructure.

5.5.1.1 Improve network coverage in rural areas

A 72-year-old female LEAP beneficiary in the Ada-East district was of the view that the fixing of the network would help to effectively use mobile money and also reach out to her relatives when she is sick for support. She said:

> The network issue, sometimes if you go to the mobile money vendors they say there is no network. And you see sometimes calling a friend or relative, you cannot hear from them, and maybe if you are sick and you are seeking help you won't hear from them. They should let the network be stable, so that if we are going to collect our money, we can have it or when we call we should hear of them. (Field Note, 2025)

A caregiver for one of the LEAP beneficiaries echoed the same suggestion. She said:

> “I only plead that they should work on our network, so always it will be active. If we want to make any payment on phone so that we get it easy to do" (Field Note, 2025).

An official of the LEAP management secretariat and an official of Inclusion Ghana suggest a collaboration between government and telecommunication providers to ensure that areas without telecom masts are mounted for the people to have access. Similarly, both head official and a staff

member at the social welfare in the Ada-East district suggested that the telecommunication industry must focus on improving network accessibility in the rural areas.

A political scientist at the Department of Political Science, University of Ghana, speaking on the need to improve the network infrastructure bluntly said:

> "I think we have to improve the whole internet infrastructure or network infrastructure in rural areas. Without it, any attempt at inclusion would fail" (Field Note, 2025).

5.5.1.2 Provision of social amenities

A focal person for LEAP in the La Nkwantanang Madina Municipal was of the view that even though the network expansion was important, the extension of rural electrification was equally important. In his words:

> "The extension of this rural electrification can also help. But if there is electricity there and if there is network there, it will be a better system" (Field Note, 2025).

5.5.1.3 Increase rural banking access

A banking expert at the Ada-East district said that government could set up small banks in rural communities so that people can have access to them within walking distance to transact business. In his words:

> Government can also set up small banks in their communities, we call it community-based banking, that the people can be able to access. Just a short walking distance not like big banks that they need to pay cash up and down before they get there, but community-based so the people can have access. (Field Note, 2025)

5.5.2 Digital literacy initiatives

To gain insight into a solution like digital literacy, to enhance adoption of digital financial services. It was imperative to engage the point of view of various stakeholders on what must be done on digital literacy.

5.5.2.1 Age-appropriate training

A 72-year-old female LEAP beneficiary said that if there is training for older people that they can understand, it will be profitable to them. In her words, she said:

> If they can come and train us, the old people and we can understand it. It will be profitable for us. Like how at my now, we need help because at the time we are schooling, we do not know nothing about this digital digital and this our age too. (Field Note, 2025)

A staff member of the social welfare at the Ada-East district called for more training programs to be organized for beneficiaries to improve their know-how in accessing digital financial services. In her words:

> "I believe organizing training programs for our beneficiaries would also help them or would improve their knowledge in accessing digital financial services" (Field Note, 2025).

5.5.2.2 Permanent ICT skills centers

A 64-year-old female LEAP beneficiary resident in Oyarifa had this suggestion on the digital training center. She said:

> If government makes up it mind to help to create a digital training center. We have an assemblyman here. So, when he is entrusted with it. He can work on it to make arrangements for us to be able to learn it. (Field Note, 2025)

A 74-year-old male LEAP beneficiary resident in Oyarifa also said:

> "If they can put up an ICT training facility, it will help" (Field Note, 2025).

5.5.2.3 Sensitization and Education

An official of Inclusion Ghana advocated for greater sensitization on how to access digital financial services, especially for the uneducated. He said:

> "I think that more and more we need to get sensitized about how things are accessed. Because people are not well educated...I think we need more orientation about some of the existing financial facilities" (Field Note, 2025).

Supporting this viewpoint, an official of the LEAP management secretariat stated that sensitization would help the LEAP beneficiaries understand how digital financial services operate. He said:

> "We need to sensitize the people, for instance, through the project, some LEAP beneficiaries understand how these things operate. It means that sensitization went in there" (Field Note, 2025).

5.5.3 Device accessibility

To gain insight into a solution like device accessibility, to enhance adoption of digital financial services. It was imperative to engage the point of view of various stakeholders on what must be done on device accessibility.

5.5.3.1 Subsidized device provision

An official of the LEAP management secretariat was of the view that government can put in place some mechanisms to make digital devices less expensive than they currently are. He said:

> Also put in mechanisms to ensure that the devices are not as expensive as it used to be, let's say with a certain amount of money somebody can buy a mobile phone that can conduct one or two businesses. (Field Note, 2025)

5.5.3.2 Free device distribution for beneficiaries

A member of the social welfare at the Ada-East district went a little further to suggest that government intervene in providing these beneficiaries with mobile devices to help them access these digital financial services. Similarly, a 64-year-old female LEAP beneficiary was in favour of some provision of a mobile phone by government. She had this to say:

> "I am old, but if I get a smartphone, I can be able to use it to do something. So, if some is brought here it will be fine" (Field Note, 2025).

5.5.3.3 Hired-purchase schemes

A political scientist from the Department of Political Science, University of Ghana, suggests that a hire-purchase scheme should be instituted for those without devices. Where individuals without

digital devices sign up to get phones on credit with small deductions made from their monies. In his words:

> "Individuals without mobile phones, some do not even have SIM cards and all that, the government can, in a way, provide them with these phones while they deduct from them for about a year or two" (Field Note, 2025).

5.5.4 Service Design Improvements

To gain insight into a solution like service design improvement, to enhance the adoption of digital financial services. It was imperative to engage the point of view of various stakeholders on what must be done on service design improvement.

5.5.4.1 Multiple withdrawal options

A banking expert at the Ada-East district was of the view that multiple means of withdrawal should be accessible to LEAP beneficiaries. He suggests that:

> "Not only E-zwich...I think the most focus should be on developing another means, like maybe a USSD code or software that can help people be in their homes and be able to transact business" (Field Note, 2025).

Similarly, the political scientist also backs the call for the creation of a short code to augment the withdrawal options for LEAP beneficiaries.

> "I think a short code could work" (Field Note, 2025).

5.5.4.2 Alternative authentication methods

Again, the banking expert at the Ada-East district suggested that government can generate secret codes for people during their registration process. Such that when they input their PIN on a platform, they can access their money.

5.5.5 Introduction of financial experts at the local level

A political scientist at the Department of Political Science, University of Ghana, suggests a policy introducing financial officers to the social welfare at the district level. This, he believes, would solve the challenge of the lack of financial training among LEAP beneficiaries. In his words, he said:

> Government must broaden the scope by ensuring that, within each district, we have a financial officer. What we have to do is maybe include a deputy financial officer to the LEAP department, so that they can be able to go around and educate these people about available financial options (Field Note, 2025).

5.5.6 Introduction of digital investment schemes

A political scientist at the Department of Political Science, University of Ghana, proposed that the state introduce some digital investment opportunities for LEAP beneficiaries to be able to participate in. He suggested that while digital training is organized, it should also be used as a form of onboarding for LEAP beneficiaries to invest online. He cited MTN's introduction of Yellow Savings as a good guide for government to institutionalize. Investing a small percentage of the LEAP grant on behalf of the beneficiaries. He believed that in time the beneficiaries would come to fully accept and partake in such online investment schemes. He said:

> While training these individuals to attain these digital skills, it will be better that it is used as a form of onboarding for them to also be able to invest online. We've seen other entities like MTN introduce Yellow Savings and all that for the general public. I think government can find a way to institutionalizing or bringing on board such versions...to invest these small small monies to get small small interest. I think with time, they would find interest in it to actually partake fully. (Field Note, 2025)

5.5.7 Multiple information delivery modes

An official of Inclusion Ghana was of the view that increasing access to information is key to promoting financial inclusion. He opined that making services accessible in a variety of formats for various individuals with special needs was the way to go so far as digital financial inclusion was concerned. He said:

> Access to information is not just about having the information on paper but it is about the delivery of the information, that even people who never see sometimes they need the thing in a braille format. There are people who are deaf, who can even watch a television, but they do not know what they are saying. Services must be provided in accessible format to people who need what (Field Note, 2025).

5.5.8 Broader consultation at policy design stage

An official of Inclusion Ghana insists that broader consultation must take place with relevant groups before designing policy interventions. He said:

> There are vulnerable groups like women groups, groups of persons with disabilities, they all have diverse needs, and you need to engage and understand their peculiar needs so that we will be able to help them get included in all financial services. (Field Note, 2025)

5.5.8.1 Establishment of a responsive monitoring and evaluation system

Again, an official of Inclusion Ghana states that there should be an effective mechanism in place to educate on how to access digital financial services, register a complaint when one encounters an issue, and a continuous monitoring of how cases are resolved. In his words:

> A laid down guideline that is given. One, how to access it. Two, if you have complaints or you want to report something where you can do that. Three, having a case management system that continuously monitors how people's issues have been resolved from time to time. And making sure that people are satisfied with the feedback that they are getting. (Field Note, 2025)

5.6 DISCUSSION OF RESEARCH FINDINGS

This section discusses the findings of the study in relation to the four research objectives. The findings are interpreted thematically, drawing on evidence from the interviews conducted with respondents and situated within the broader trends of digital financial inclusion and exclusion. The discussion highlights both individual and structural factors shaping the adoption of digital financial services among LEAP beneficiaries.

Research Objective 1:

THE IMPACT OF THE DIGITAL DIVIDE ON THE ADOPTION OF DIGITAL FINANCE AMONG LEAP BENEFICIARIES

The first objective of the study sought to examine the extent to which the digital divide influences the adoption of digital finance among LEAP beneficiaries. The preceding analysis section revealed three interconnected themes: limited digital literacy, limited device ownership, and technological barriers.

Limited Digital Literacy

A recurring pattern across interviews emerged that elderly beneficiaries lacked the required knowledge and skills to engage with digital finance. Some respondents admitted that their time of education did not include digital training. While others reported that they had not received any formal education. Hence, their inability to engage with current technological devices and tools. This underscores a generational gap where older beneficiaries are significantly disadvantaged compared to younger populations. This agrees with Fink and Kenny's (2003) classification of the levels of digital divide. They classified the interpretation of the digital divide into four categories, amongst them being the gap in the capacity to use ICTs, calculated by the individual's skill base. This is also in line with Demirgüç-Kunt et al. (2021), who found that

technology can be an obstacle for older individuals who may lack confidence, familiarity, or digital literacy to engage with digital financial services. Similarly, these findings align with those of Anakpo et al. (2023) and Aziz and Naima (2021), who argue that the lack of digital literacy in Africa presents an obstacle to effectively using modern technologies and fully participating in the digital economy. Furthermore, Anakpo et al. (2023) pointed out that fewer than half of the internet users in Africa have the most recent skills to keep up with the dynamic, fast-changing digital landscape.

However, in contrast to elderly beneficiaries, younger beneficiaries stand a better chance of gaining formal ICT training. According to the focal person for La Nkwantanang Madina Municipal, younger beneficiaries are enrolled in schools and provided with modern ICT tools to aid their learning. Also, they are likely to be introduced to the ICT subject. This, in turn, gives them a greater chance of accessing digital training and engaging with digital technology. This perspective is in line with the study of Livingstone (2024), who found that the promotion of digital skills among young people through policy programs and educational curricula brings direct benefits and encourages the development of additional digital and life skills. Similarly, Sutirman et al. (2022) corroborate this perspective by asserting that the introduction of the youth to digital literacy education would improve the ability of the youth in the usage of information technology. Furthermore, Dinika (2024) found that digital skills training has the potential to equip the youth with relevant skills and nurture entrepreneurial skills, which can help combat unemployment in the digital age.

The crucial role of digital literacy training for women beneficiaries cannot be overstated. Women LEAP beneficiaries from the four selected districts who had access to digital training combined with productive activities under the piloted digital financial and productive inclusion

project would have had an increase in their productivity and reached a greater market base to expand their business and gain financial independence. Especially as digital competences are unequally distributed by gender (Arroyo & Valenduc, 2016). Arroyo and Valenduc (2016) found that the acquisition of digital competences in the case of less-educated women can open doors to new forms of work, such as online work and greater job opportunities. Similarly, Mukherjee et al. (2019), in examining the impact of a digital literacy program among unemployed women, also found the emergence of new employment opportunities for women trainees who had completed the training successfully.

Rural beneficiaries face significant challenges in accessing digital literacy programs. Especially as all the LEAP respondents denied having received any form of digital training. A political scientist asserts that there is no official training mechanism or program to aid beneficiaries, but rather a subjective training based on discretion. A banking expert also denied any knowledge of a government-sponsored digital literacy program; however, attest to NGO-sponsored program that trains LEAP beneficiaries on digital literacy. In contrast, a head official of the social welfare department at the district assembly at Ada stated that periodic trainings are organized for LEAP beneficiaries and their caregivers. However, the lack of a timeline for the training suggests an inconsistency in any type of digital training program for LEAP beneficiaries. This could lead to greater digital skills divide for LEAP beneficiaries living in rural areas. This is in line with the work of Aruleba and Jere (2022), who found that the lack of proper digital skill training programs deprives rural communities of equal access to digital services and expands the digital divide within a country.

Another sub-theme is the dependence on family members or caregivers to navigate digital transactions. Several respondents noted that their children, relatives, or caregivers were solely

responsible for operating mobile devices or making any transactions. This over-reliance on intermediaries not only limits beneficiaries' freedom over their own finances but also opens them up to risks like misappropriation, mismanagement, exploitation, fraud, and other financial crimes by trusted relatives and caregivers.

Limited Device Ownership

Device scarcity emerged as a critical constraint. While a few beneficiaries owned a basic phone, none of them had owned smartphones, and in some cases, they had no personal phones at all. Without access to appropriate devices, beneficiaries were excluded from advanced digital financial applications, such as the use of mobile apps and banking portals among others, thereby limiting their participation to the most basic functions, such as mobile money withdrawals. The inability of the LEAP beneficiaries to own smartphones can be attributed to the cost of purchasing and maintenance of such devices, given their status as poor individuals. This finding is in line with Twum et al. (2024), who found that the cost of accessing and using digital technology is a decisive factor for both rural and urban residents. They found that urban respondents had relatively higher levels of device ownership due to relatively higher income levels, as compared to rural respondents who had relatively lower rates of device ownership as compared to urban respondents. Due to the generally lower average income of rural residents (Twum et al., 2024).

Technological Barriers

Network stability was a dominant theme, especially among respondents from the Ada-East district. Some respondents indicated the difficulty in getting network for their daily mobile money transactions or even calls. This result highlights the influence of geographical location and deficient network infrastructure on internet and network access in rural areas. The instability of the network causes delays in accessing funds, restricts communication, and discourages the use of

digital financial services. This finding reflects the work of Raihan et al. (2025), which found that marginalized individuals without proper devices and reliable internet find navigating the digital world difficult, which prevents their acquisition of digital skills.

Disabled beneficiaries and access to digital financial services

Persons with disability are faced with numerous challenges in their contact with the digital world. For example, an official of Inclusion Ghana cited the ordeal of little people, for instance, in their use of ATMs, or the deaf and dumb, who might need an interpreter to effectively communicate with the vendor of a digital financial service. These ordeals present a challenge in their interaction or attempt to use digital financial services. This study found that they are at risk of digital financial exclusion due to limited accessibility modes to match their special conditions and needs. Thereby, limiting the independence of persons with disabilities in their interaction with digital financial services. This finding is in line with Raihan et al. (2025), who found that persons with disabilities face a greater risk of digital exclusion and vulnerability due to limited content accessible to physical deformities. They may require special arrangements in learning, hearing, and vision, and may lack confidence in using modern technological devices (Raihan et al., 2025)

Voluntary exclusion

Voluntary exclusion can also impact the drive towards digital financial inclusion. A male respondent expressed his dislike for mobile money and preferred not to use it. When pressed as to why he disliked it and did not want to register it, he declined to give any precise answer as to why. This study found that some individuals might voluntarily decline to use digital financial services for various reasons, even though they might have the services close to them or at their disposal. This is in line with Fungáčová and Weill (2015), who found that the decision not to have a formal account is mainly driven by voluntary exclusion.

Overall, the digital divide has a profound impact on the adoption of digital finance. LEAP beneficiaries are physically present in the digital space but remain passive users, mainly because of digital literacy gaps, device scarcity, and unreliable network infrastructure. Their engagement with digital finance is limited primarily to withdrawals, with little evidence of broad use or application of digital platforms for savings, bill payments, seeking loans or credit, investments, or digital purchases.

Research Objective 2:

THE INFLUENCE OF LOCATION ON ADOPTION OF DIGITAL FINANCE

The second objective examined how geographical location affects the adoption of digital financial services. The finding demonstrates that location plays a significant role in access, producing what may be described as an uneven digital economy.

Urban advantage

Respondents in the peri-urban communities, as well as the experts interviewed, reported greater access to services due to stronger infrastructure and wider availability of banking outlets. For instance, the political scientist classified the network infrastructure in the urban areas as solid. As none of the LEAP beneficiaries in the peri-urban area raised an issue with network challenges. However, in contrast to the prevailing perception that urban settlers had banking and service points at their doorstep (Adabor et al., 2023; Allen et al., 2016b), the study observed that although respondents in urban centers had more banking services and outlets, not all places in the urban areas had such amenities. For instance, a 64-year-old female respondent in Oyarifa lamented that the E-zwich service point and the bank were not close to her community. Hence, she had to pick a car to Madina (a more urbanized center) to get to the bank, which comes at an extra cost to

her. This suggests an internal urban disparity within urban centers. Such that, residency in urban centers does not always guarantee proximity to digital financial services for the urban poor.

Some expert respondents also suggested that there might be a rub-off effect on the LEAP beneficiaries who reside in the urban areas. Due to their exposure to city life and interaction with the banking system. However, this appears to have a limited effect on the LEAP beneficiaries interviewed for the study. This could be attributed to their lack of ownership of smart mobile devices or their limited digital skills. This is in line with the study of Duan et al. (2024), who found that digital finance had a limited impact on urban poor groups like the elderly and the disabled.

Rural Disadvantage

Rural respondents consistently bemoaned their challenges arising from poor network infrastructure and limited financial service points. The respondents interviewed agreed that the poor network infrastructure in the rural areas was a major issue that disrupted their use of digital financial services and communication in general. Also, the limited financial service points meant that rural residents had to travel long distances to access digital finance services like the E-zwich. A respondent stated that in her community, only one vendor was available; however, frequent machine breakdown was a constant feature. This adds to their cost, exposes beneficiaries to road hazards, and causes delays in the receipt of their monies. This finding aligns with the work of Lopez and Winkler (2018), who found that the progress of financial inclusion is slow in rural areas due to higher transaction costs, higher risks, and an unfavourable contracting environment, which makes it difficult for financial institutions to achieve sustainability in these areas.

An important sub-theme is the delayed implementation of digital programs in rural areas. Respondents pointed out that most government initiatives begin in the urban areas before gradually

reaching rural communities. Indicating an unequal implementation rollout structure that leaves rural areas at a disadvantage.

Geographical location is an important determinant of digital financial inclusion (Demirgüç-Kunt et al., 2022; Soumaré et al., 2016). Although location was not seen to have much impact on the LEAP beneficiaries residing in urban areas for this study, they do stand a better chance of integrating into digital finance due to better infrastructure, while rural beneficiaries remain disadvantaged by limited access points, poor network infrastructure, and delayed service implementation rollout. This underscores the existence of a spatial inequality in not just the rural-urban divide but also an internal spatial inequality within urban areas.

Research Objective 3:

REASONS WHY CHALLENGES PERSIST

The third objective focused on why challenges of digital financial inclusion continue to persist. Four themes emerged: infrastructure deficits, economic constraints, policy gaps, and technology design limitations.

Infrastructure Deficits

Network instability remains a pressing barrier. As the community focal person pointed out, owning a smartphone, where there is poor network connectivity, means one cannot access digital financial services. This continues to be a challenge to adopting digital financial services, especially for rural areas that are not connected to the national grid. This coincides with a study by the International Telecommunication Union (ITU), which found that closing the digital infrastructure gap requires at least USD 1.6 trillion investment, mostly in developing countries (Smith, 2025).

Economic constraints

Poverty was identified as a major reason for exclusion. The LEAP grants are too small to cover the cost of purchasing or maintaining smartphones. Hence, it was observed that none of the LEAP beneficiaries interviewed owned a smartphone themselves. While the transactions on their basic phones were limited to mobile money transactions. This matches with previous research by Simatele and Maciko (2022) and World Bank (n.d.), who found demand-side factors such as the lack of employment, ownership of a mobile device, and low income as significant barriers to digital financial inclusion. This confirms that current governmental intervention, such as subsidies, is insufficient, perhaps non-existent, to address the digital divide (access to devices) among LEAP beneficiaries, which sustains financial vulnerability as pointed out by the vulnerable group theory.

Policy Gaps

The absence of a coherent government-led strategy on digital inclusion was emphasized by the experts interviewed. The training opportunities, when they exist, appear sporadic and sparse. As one expert noted, the training lacked institutionalization, which contributes to the persistence of digital exclusion. A wrong policy approach also appeared to be an issue identified as a cause of the persistence of the challenge to digital financial inclusion. An official of Inclusion Ghana, a civil society group, blamed government's knee-jerk approach to policy making and the neglect of important stakeholders in the policy design stage as a reason why policy interventions fail to achieve the desired results. Again, he also slammed government's weak monitoring and evaluation system to continuously measure the impact of their policy and make changes where necessary. This aligns with the study by Mpofu (2024), who found that stakeholder cooperation was essential to expanding digital financial services. He argued that there must be a coordinated effort between government, digital financial services providers, mobile networks, and other stakeholders. This

uncoordinated approach represents the limited success of government intervention, particularly the literacy programs. Thereby undermining the development of digital finance among LEAP beneficiaries.

Technology Design Limitation

The E-zwich system, as an introduction of the LEAP beneficiaries to the digital system, appears to be riddled with challenges. From issues to do with biometric fingerprint verification to card renewal issues emerged as a recurring source of frustration for LEAP beneficiaries interviewed. Many elderly beneficiaries reported difficulties in authenticating their identity, which sometimes resulted in missed payments, often adding further transport costs to resolve the issue. This is in line with studies of Arora and Bhatia (2022) and El-Abed and Charrier (2012), who found that one of the drawbacks of biometric technology is the uncertainty of confirmation verification outcome and enrollment, especially when the verification of biometric information is subject to mistakes. Therefore, while the E-zwich system is aimed at including the vulnerable population, such as LEAP beneficiaries, the rigidity and the flaws of the system fundamentally create financial vulnerability. The vulnerable population cannot even reliably access the cash transfer meant to improve their livelihood. This undermines the core tenets of the vulnerable group theory. The impact of the technological limitations is hastened by institutional dormancy surrounding the policy. The persistence of the biometric issues, without adaptation or introduction of viable alternatives such as PIN or OTP systems, demonstrates the slowness of implementing institutions in adapting to digital solutions that suit the needs of its vulnerable population. The lack of adaptation highlights a flaw in the effectiveness of the government intervention (linking back

to the conceptual framework) in this case, the LEAP program, as the established system actively harms rather than support beneficiaries' financial independence.

Lack of financial training

The lack of financial training also emerged as an important theme that explains the persistence of digital financial exclusion. A political scientist pointed out that LEAP beneficiaries most often lacked financial education to utilize digital financial services. This is in line with a study by the World Bank (n.d.) that identified the lack of financial education as a key impediment to digital financial inclusion.

The persistence of digital financial exclusion can be attributed to intersecting structural and systemic barriers. Infrastructure gaps, poverty, fragmented policies, and rigid technological systems combine to perpetuate exclusion. These challenges are not accidental but are symptomatic of deeper inequalities within the digital use space.

Research Objective 4:

MEASURES GOVERNMENT CAN TAKE TO PREVENT THE RISK OF A DIGITAL FINANCIAL DIVIDE

The final objective assessed potential measures that could reduce or prevent the digital financial divide. The interviews highlighted four categories of intervention: infrastructure expansion, digital literacy initiatives, device accessibility, and service design improvements.

Infrastructure Expansion

Respondents emphasized the need for improved network coverage and expanded banking outlets in rural areas. A banking expert further proposed community-based agency banking centers to reduce dependence on distant commercial banks. This is in line with Duan et al. (2024), who suggested priority should be given to improving service infrastructure in underdeveloped areas to

boost the adoption of digital financial services in these areas. Similarly, Bailey and Nyabola (2021) suggested prioritized state investments in connectivity that are targeted at underserved communities and persons. For example, expanding the use of the "kiosk in a box" approach in rural and poor urban communities (Bailey & Nyabola, 2021).

Digital Literacy Initiatives

Beneficiaries and experts interviewed expressed strong demand for tailored digital skill training program. Others suggested permanent ICT skill centers to ensure sustained capacity building. This recommendation is in line with Tay et al. (2022) and Mpofu (2024), who found that digital financial services require digital knowledge and education. The lack of this restricts the use of digital financial services.

Device Accessibility

The affordability of devices was identified as central to bridging the digital financial divide. A staff member of the social welfare recommended providing mobile devices to beneficiaries, while a political scientist suggested a hire-purchase scheme for LEAP beneficiaries with little deductions from their grants over the course of a year or two. A banking expert, however, proposed developing USSD-based platforms that are compatible with basic phones. Such approaches would significantly reduce barriers to access. This is in line with Forman et al. (2020), who found that access to devices like laptops or computers increases the chances of the use of online services and digital skills development.

Service Design Improvements

The overreliance on E-zwich was widely criticized. A banking expert suggested diversifying payment platforms and introducing PIN or OTP-based authentication methods. This would accommodate elderly users whose fingerprints are often difficult to capture.

The proposed measures converge around four pillars: infrastructure, literacy, devices, and system redesign. If implemented in a coordinated manner, these reforms could significantly reduce digital exclusion and transform LEAP beneficiaries from passive to active participants in the digital financial system.

Conclusion

Across all four objectives, several cross-cutting trends emerge. First, the elderly and rural poor remain most excluded, facing multiple intersecting barriers, including literacy gaps, device scarcity, and infrastructural deficit. Secondly, digital adoption is shallow, largely limited to withdrawals rather than full engagement with the digital financial system. Third, urban beneficiaries have not shown much integration, reflecting what could be internal spatial inequality within the urban areas. Fourth, the E-zwich system itself has design flaws that exacerbate exclusion for older users. Finally, the solutions proposed by beneficiaries and experts align around pragmatic interventions: improving infrastructure, subsidizing devices, institutionalizing training, and diversifying service design.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the key findings from the study, a conclusion, and recommendations. The proffered recommendations are based on the impact of the digital divide on the adoption of digital financial services among LEAP beneficiaries. The findings are structured around the research objectives of the study.

6.2 Summary of Findings

The study's overarching objective was to investigate the impact of the digital divide on the adoption of digital financial services among LEAP beneficiaries in Ghana, specifically in the Ada-East District and La Nkwantanang Madina Municipal. To achieve this objective, the study employed a qualitative research approach, utilizing semi-structured interviews to gather the perspectives of 16 respondents. This chapter synthesizes the conclusions drawn in relation to the research objectives posed at the beginning of the study.

The summary of the findings is presented under thematic headings. These headings are based on the research objectives below.

6.3 Impact of The Digital Divide on The Adoption of Digital Finance

Three key themes emerged: limited digital literacy, limited device ownership, and technological barriers.

Limited Digital Literacy

The study revealed that limited digital literacy was particularly pronounced among elderly beneficiaries, who never received ICT education during their schooling years. Thus, it emerged that elderly beneficiaries lacked the required knowledge and skills to engage with digital platforms and digital financial services. Many depended heavily on their children, relatives, or caregivers to operate digital devices, which undermined their autonomy and exposed them to risks of mismanagement and other financial crimes. In contrast, younger LEAP beneficiaries stood a better chance of gaining formal ICT training. Especially, as there exist various interventions to enroll them in school. Women LEAP beneficiaries who took part in a piloted program on digital training and productive inclusion were seen to have a greater opportunity to engage digital financial services as compared to those interviewed from the two districts who had no such exposure.

Limited device ownership

The study found that limited device ownership was another barrier. While some owned basic phones, none had smartphones, and some had no phones at all. This excluded LEAP beneficiaries from accessing advanced mobile applications and digital banking portals but limited their participation to the most basic functions, such as mobile money and E-zwich withdrawals. There was no evidence of greater use of digital services such as digital savings, accessing loans, investments, or insurance. This also limited their use of digital financial services and reinforced dependence on others for their transactions.

Technological barriers

The study revealed that technological barriers, particularly biometric failures on the E-zwich system and poor network coverage, constrained the adoption of digital financial services. The difficulty in getting network coverage resulted in delays in accessing funds, restricted communication, and discouraged the use of digital financial services.

6.4 Influence of Location on The Adoption of Digital Financial Services

Location was not seen to have a significant influence on access and adoption of digital financial services. However, it reflected urban advantages, rural disadvantages, and delayed service rollouts.

Urban advantage

Urban beneficiaries enjoyed better infrastructure, early access to digital programs, and more service outlets. These were enablers of better engagement with digital financial services. However, contrary to the prevailing perception that urban settlers had banking and service points at their doorstep, the study observed that although respondents in urban centers had more banking services and outlets, not all places in the urban areas had such amenities. Suggesting that internal urban disparity within urban centers exists. Nonetheless, although location was not seen to have much impact on the LEAP beneficiaries residing in urban areas for the study, they do stand a better chance of integrating into digital finance due to better infrastructure.

Rural disadvantage

Rural beneficiaries faced scarce service points, higher transport costs, and frequent network failures. The respondents interviewed agreed that poor network architecture in rural areas was a major issue that disrupted the use of digital financial services.

Delayed implementation rollout

Respondents pointed out that government initiatives began in urban areas before gradually making their way to rural areas. This indicated an unequal implementation rollout structure that leaves rural areas at a disadvantage.

6.5 Reasons Why Challenges Persist

The persistence of digital financial exclusion was attributed to infrastructure deficits, economic constraints, policy gaps, technology design limitations, and lack of financial training.

Infrastructure deficit

Poor infrastructure, including poor rural network coverage, lack of social amenities like rural electrification, and limited local banking facilities, poses a significant barrier to the use of digital financial services.

Economic constraints

Poverty and limited economic means meant that the LEAP grant was insufficient to purchase or maintain a smartphone, while transportation costs made accessing physical banking outlets burdensome for LEAP beneficiaries.

Policy gaps

The study found that there was an absence of a government-led strategy on digital literacy and inclusion, especially for LEAP beneficiaries, with trainings often fragmented and dependent on NGOs. Some respondents also blamed government's policy approach, wrong policy design

approach, and weak monitoring and evaluation system as factors for the persistence of the challenges of digital financial adoption.

Technology design limitation

The study revealed that the E-zwich system, which was meant to be an introduction of LEAP beneficiaries to the digital system, appears to have many challenges. Issues with biometric fingerprint verification authentication and difficulties with card renewal all continuously discourage the use of digital financial services.

Lack of financial training

The study also revealed that the lack of financial training explains the persistence of digital financial exclusion. An expert argued that the lack of financial education training, such as savings, accessing credit, and investments, and on how to utilize digital financial services, also significantly contributes to the persistence of digital financial exclusion.

6.6 Measures to Prevent the Risk of a Digital Financial Divide

Beneficiaries and experts highlighted four broad categories of potential interventions: infrastructure expansion, digital literacy initiatives, device accessibility, and service design improvements.

Infrastructure expansion

The study found that respondents were of the view that collaborations between the government and network providers to make investments and improve network coverage, particularly in underserved communities, would help improve the adoption of digital financial services. Also, the establishment of community-based banking points would reduce travel burdens on LEAP beneficiaries and improve access to banks and their services.

Digital literacy initiatives

The study reveals that LEAP beneficiaries expressed willingness to learn and expressed strong demand for tailored digital skill training programs. For example, digital literacy initiatives should include age-appropriate ICT training and the establishment of permanent skills training centers for beneficiaries.

Device Accessibility

The ability to afford devices came up as essential to bridging the digital divide. Alternative feasible arrangements, such as free provision of mobile devices, or subsidizing devices for beneficiaries, or perhaps hire-purchase schemes, are all viable alternatives for government to explore in its commitment to preventing the risk of a digital financial divide.

Service design improvements

The overreliance on E-zwich was criticized. Respondents registered many challenges with the system. Diversifying beyond the E-zwich system and introducing PIN or OTP authentication to replace the unreliable biometrics system.

6.7 Conclusion

Based on the above, the study draws the following conclusions. The findings point to the conclusion that digital exclusion among LEAP beneficiaries is multi-dimensional and systemic, arising from numerous disparities such as infrastructure, poverty, and age, among others.

Firstly, the digital divide significantly undermines adoption, leaving most beneficiaries as passive users of digital financial services rather than active and empowered participants. They lacked the enabling environment to engage with digital finance.

Secondly, location amplifies inequalities; however, location was not seen to have had much effect on the urban beneficiaries in their engagement with digital finance. Thus, suggesting internal disparities within urban areas, while rural beneficiaries lagged due to infrastructural and logistical constraints.

Thirdly, the persistence of the challenges reflects not only resource and infrastructural constraints but also policy, lack of financial training, and design failures, including inadequate government-led digital training initiatives to orient the vulnerable population to the workings of digital finance and the non-changing, static biometric system.

Fourthly, beneficiaries themselves demonstrate clear awareness of the barriers they face and proposed real solutions, which, if implemented, would transform digital finance into an avenue for much-needed financial inclusion. The vision for which digital finance was touted as a solution in the first place.

In summary, the study concluded that digital finance, in its current form, risks reproducing and even widening existing inequalities among poor and vulnerable groups such as LEAP beneficiaries and the rest of the population. Thus, achieving the opposite results it was intended to resolve, unless some deliberate and unified reforms are taken to avert the risk of a digital financial divide.

6.8 Recommendations

Based on the findings and conclusions, the following recommendations are made for government, policymakers, and stakeholders in digital financial inclusion. These are divided into short-term, medium-term and long-term interventions.

Short-Term Interventions

Service and System Redesign

Diversifying LEAP payment platforms beyond the E-zwich to include multiple options such as mobile money, bank transfers, and agency banking can help relieve the struggle of LEAP beneficiaries with the E-zwich. Also, introduce alternative authentication methods such as PINs or OTPs, reducing dependence on biometrics, which often presents a challenge to identifying older beneficiaries.

Digital Literacy and Capacity Building

Institutionalize age-appropriate digital literacy training within LEAP operations, ensuring that beneficiaries, particularly the elderly, are supported with step-by-step guidance. Also, the development and distribution of visual and language-friendly training materials, such as pictorial manuals in local languages. Furthermore, the establishment of permanent ICT skills centers in rural and peri-urban communities to provide continuous capacity building. The assignment financial officers at lower levels of the program's authority chain such as the social welfare department, to help provide financial literacy.

Medium-Term Interventions

Device Accessibility

Partnerships with telecommunication providers to subsidize smartphones for LEAP households, ensuring affordability. Also, promoting the development of low-tech USSD platforms that are easy to access on basic phones, enabling beneficiaries without smartphones to access digital financial services.

Long-Term Interventions

Infrastructure Development

The study recommends the expansion and stabilization of mobile network coverage in rural areas through strategic public-private partnerships with telecommunication companies. Also, the

establishment of community-based agency banking outlets to reduce long travel distances and reliance on a single vendor. Furthermore, prioritization of rural electrification to ensure that LEAP beneficiaries in rural areas get reliable power to charge their devices and access modern digital tools.

Policy Coordination

The integration of digital financial inclusion into a broader LEAP policy framework would ensure an alignment between social protection and digital inclusion. Also, enhancing coordination between government, financial institutions, and NGOs to ensure that training, infrastructure development, and service design are implemented holistically.

This chapter has presented the key findings, conclusions, and recommendations arising from the study. The evidence demonstrates that digital finance, while offering opportunities for inclusion, also introduces new risks of digital exclusion for vulnerable groups such as LEAP beneficiaries. Addressing these challenges requires a combined approach of infrastructure investment, literacy training, device accessibility, and system redesign. With deliberate government action and stakeholder collaboration, the digital divide can be narrowed, transforming the Livelihood Empowerment Against Poverty program from a basic cash transfer program of soothing poverty and a continuous financial dependence to a Livelihood Empowerment onto Financial Independence program.

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APPENDIX A

INTERVIEW GUIDE FOR LEAP BENEFICIARIES

Introduction

I am an MPhil candidate of the Department of Political Science, University of Ghana researching on the topic, "Digitalization, Innovation, and Financial Inclusion in Ghana. The case of Ada East District and La Nkwantanang Madina Municipal" under the supervision of Dr. Joshua Zaato. The purpose is to understand how government efforts have influenced access to and use of digital financial services among LEAP beneficiaries. I would be grateful if you could assist in providing answers to the questions below. In line with the ethics of research, the information provided will be solely for academic purposes and respondents are assured of anonymity and confidentiality. The interview section will take approximately 40 to 50 minutes and will be recorded for further analysis upon approval. Thank you.

Section A: Introduction

Age:

Gender:

Location:

Occupation:

Educational Level:

Section B: Digital Access & Literacy

1. Do you have regular access to the internet? If so, through what means (mobile data, Wi-Fi, public internet cafes, etc.)?
2. What type of digital devices do you own or regularly use (e.g., smartphone, tablet, laptop)?
3. How confident are you in using digital technologies like mobile apps, online banking platforms, or digital wallets?
4. Have you ever received any form of digital training or literacy education? If yes, by whom?

Section C: Government Intervention

5. Are you aware of any government initiatives aimed at improving internet access or digital financial services in your area?
6. Have you or someone you know benefited from any government support related to digital access (e.g., free Wi-Fi, device distribution, training programs)?
7. How would you describe the effectiveness of these government efforts in your community?

Section D: Digital Financial Inclusion

8. Do you use any digital financial service (e.g., mobile money, internet banking, online payment platforms? Which ones?
9. What motivates or discourages you from using digital financial services?
10. Have government interventions made it easier or harder for you to use these services? Can you provide an example?

Section E: Urban vs. Rural Perspectives

11. In your opinion, how does location (urban or rural) affect your ability to access and use digital financial services?
12. Do you think people in urban areas have an advantage over those in rural areas (or vice versa) when it comes to benefiting from government digital programs? Why or why not?

Section F: Challenges & Recommendations

13. What challenges have you faces in accessing digital technology or financial services?
14. Why do the challenges persist?
15. What kind of support or improvements would you suggest to make digital financial services more accessible in your area?

Thank you for your time and sharing your thoughts. Your input is incredibly valuable to understanding of digital inclusion and how policies can be better it.

APPENDIX B

INTERVIEW GUIDE FOR GENDER MINISTRY

Introduction

I am an MPhil candidate of the Department of Political Science, University of Ghana researching on the topic, "digitalization, innovation, and financial inclusion in Ghana. The case of Ada East District and La Nkwantanang Madina Municipal" under the supervision of Dr. Joshua Zaato. The purpose is to understand how government efforts have influenced access to and use of digital financial services among LEAP beneficiaries. I would be grateful if you could assist in providing answers to the questions below. In line with the ethics of research, the information provided will be solely for academic purposes and respondents are assured of anonymity and confidentiality. The interview section will take approximately 35 to 45 minutes and will be recorded for further analysis upon approval. Thank you.

Section A: Government Intervention

1. Are you there any government initiatives aimed at improving internet access or digital financial services in rural and urban areas?
2. Which areas have benefited from any government support related to digital access (e.g., free wifi, device distribution, training programs)?
3. How would you describe the effectiveness of these government efforts in these areas?

Section B: Digital Financial Inclusion

4. Have government interventions made it easier or harder to use digital financial services? Can you provide an example?

Section C: Urban vs. Rural Perspectives

5. In your opinion, how does location (urban or rural) affect access and use digital financial services?
6. Do you think people in urban areas have an advantage over those in rural areas (or vice versa) when it comes to benefiting from government digital programs? Why or why not?

Section D: Challenges & Recommendations

7. What are the challenges in accessing digital technology or financial services?
8. Why do the challenges persist?
9. What kind of support or improvements would you suggest to make digital financial services more accessible in your area?

Thank you for your time and sharing your thoughts. Your input is incredibly valuable to understanding of digital inclusion and how policies can be better it.

APPENDIX C

INTERVIEW GUIDE FOR ACADEMICS AND NGOs

Introduction

I am an MPhil candidate of the Department of Political Science, University of Ghana researching on the topic, "digitalization, innovation, and financial inclusion in Ghana. The case of Ada East District and La Nkwantanang Madina Municipal" under the supervision of Dr. Joshua Zaato. The purpose is to understand how government efforts have influenced access to and use of digital financial services among LEAP beneficiaries. I would be grateful if you could assist in providing answers to the questions below. In line with the ethics of research, the information provided will be solely for academic purposes and respondents are assured of anonymity and confidentiality. The interview section will take approximately 30 to 40 minutes and will be recorded for further analysis upon approval. Thank you.

Section A: Government Intervention

1. Are you aware of any government initiatives aimed at improving internet access or digital financial services in rural and urban areas?
2. Have someone or specific groups you know benefited from any government support related to digital access (e.g., free wifi, device distribution, training programs)?
3. How would you describe the effectiveness of these government efforts?

Section B: Digital Financial Inclusion

4. Have government interventions made it easier or harder for these groups or people you know to use digital financial services? Can you provide an example?

Section C: Urban vs. Rural Perspectives

5. In your opinion, how does location (urban or rural) affect one's ability to access and use digital financial services?
6. Do you think people in urban areas have an advantage over those in rural areas (or vice versa) when it comes to benefiting from government digital programs? Why or why not?

Section D: Challenges & Recommendations

7. What challenges these people faced in accessing digital technology or financial services?
8. Why do the challenges persist?
9. What kind of support or improvements would you suggest to make digital financial services more accessible in these area?

Thank you for your time and sharing your thoughts. Your input is incredibly valuable to understanding of digital inclusion and how policies can be better it.

COMMENTS	STUDENT'S RESPONSE TO COMMENTS
1. There are some repetitions of concepts such as financial inclusion definitions and benefits. Summarizing these would improve flow	In response, the definitions and benefits of financial inclusion were summarized. Reference section 1.1, 8th Paragraph, Page 3
2. Staying with 2022 as most recent to make a case is not advised when there are more recent works. Please update this section (page 6)	In response, the citation was updated as (Odei-Appiah et al., 2022; Wu & Peng, 2024). Reference section 1.2, 8th Paragraph, Page 6
3. Objective two could be reworded like: To investigate the key factors contributing to the persistence of digital financial exclusion without taking away the key ingredients.	The objective two was reworded as: To investigate the key factors contributing to the persistence of digital financial exclusion in Ghana. Reference section 1.3, 2nd objective, Page 7
4. There is no explicit connection of the reviewed works to the conceptual framework designed by the candidate himself nor adequate link to the theoretical framework	The study draws on reviewed sub-themes from the literature review such as the determinants and barriers to financial inclusion to inform variables within the conceptual framework. For example, a socioeconomic factor like locality (rural/urban) is adapted to be the moderating variable of the study. Again, barriers such as education, infrastructure, and lack of money informed the choice of the independent variables. Reference section 3.2, 2nd Paragraph, Page 28
5. A more explicit link between the philosophical basis, and research objectives would strengthen the rationale. The justification for the specific design type (comparative case) could be more explicit	The study employed a comparative case study design to explore the subjective reality of digital financial exclusion and to allow for direct comparison of two cases to identify patterns and differences. Reference section 4.4.1, 2nd Paragraph, Page 35
6. The researcher failed to describe how and when saturation was reached. There was no mention of pilot testing the interview guide or through pre-interviews. There are question marks on the sampling process. How were LEAP beneficiaries identified and approached?	In response, a stronger case of how the saturation point was reached was established. Thus, the sixteen (16) individuals were deemed to represent the point of saturation for the sampled population when researcher realized that no new analytical theme could emerge from adding more participants. Reference section 4.5.2, 9th Paragraph, Page 42. A pilot testing with two older petty traders within University of Ghana was conducted to fine-tune

	the interview questions. Reference section 4.6, 1st paragraph, Page 43 Given the inherent difficulty in accessing vulnerable populations like LEAP beneficiaries, the sampling process necessitated the reliance on institutional intermediaries (Municipal Assembly as well as LEAP focal person in the case of La Nkwantanang and District Assembly in the case of Ada East) for initial contact. Reference section 4.5.1, 1st Paragraph, Page 40
7. How were the themes derived? How did you manage researcher bias?	The qualitative content analysis approach was used to compare data obtained from the field to the extant literature to establish trends and points of convergence and divergence. The process explicitly followed the open, axial, and selective coding to ensure themes were inductively derived from the linguistic content of the interview. Reference section 4.6.1, 1st Paragraph, Page 44. To mitigate potential selection bias, the researcher ensured the following procedure was followed: Independent consent was secured from all participants, and interviews were conducted privately, away from the presence of officials, thereby soliciting candid and confidential viewpoints. Reference section 4.5.1, Page 41
8. There is no link between the analytic process and the study's research objectives, making very it difficult to judge how findings will answer the main questions.	In response, an edit on the discussion on technology design limitation, policy gaps, and economic constraints were made. On the policy gaps. The lack of adaptation highlights a flaw in the effectiveness of the government intervention (linking back to the conceptual framework) in this case, the LEAP program, as the established system actively harms rather than support beneficiaries' financial independence. On the economic constraints. This confirms that current governmental intervention, such as subsidies, is insufficient, perhaps non-existent, to address the digital divide (access to devices) among LEAP beneficiaries, which sustains financial vulnerability as pointed out by the vulnerable group theory.

	Reference section Pages 78, 79 and 78 respectively.

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DENNIS NORMEGBOR 27/11/2025

(STUDENT) DATE

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DR JOSHUA ZAATO 27/11/2025

(PRINCIPAL SUPERVISOR) DATE

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PROF. EMMANUAL DEBRAH 27/11/2025

(CO-SUPERVISOR) DATE

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November 12, 2025

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Yours faithfully,

Prof Patrick Amoateng

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