THE DETERMINANTS OF FINANCIAL INCLUSION AND ACCESS TO CREDIT AMONG THE YOUTH IN KENYA.

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"A research proposal submitted to the department of Economics and Development Studies in partial fulfillment of the requirements for the award of degree in Master of Arts in economics at the University of Nairobi".

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DECLARATION

This research proposal is wholly original, and I hereby declare that it is neither an imitation of the works of others nor a copy or theft from the research of others.

X50/ 41665/2022

Date ………… Nov 20, 2023 ……………………………………………

With my authorization as the designated University Supervisor, this examinable research proposal has been submitted to the University of Nairobi.

Daniel Mwai, PhD

Date ……………………………………………………………… 28/11/2023

DEDICATION

I dedicate this research proposal to my lovely family. Your boundless love has been my support system during this academic journey. I sincerely thank you for your support, understanding, and encouragement during the research period.

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I would like to admit that this project was completed entirely by me and not by anyone else

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LIST ABBREVIATIONS

SDGs	Sustainable Development Goals
SMEs	Small and medium-sized businesses
SBA	small businesses in the United States
OECD	Organizational for economic cooperation and development
NHIF	National Health Insurance Fund
CRB	Credit Reference Bureau
FSD KENYA	Financial Sector Deepening Kenya
KNBS	Kenya National Bureau of Statistics.
CBK.	Central Bank of Kenya

Abstract

In this study, the focus was on exploring the determinants of credit access and financial inclusion among the youth in Kenya. The data used for this study was sourced from the Fin Access 2021 dataset, providing a rich and up-to-date source of information. A logistic regression model was employed to identify determinants of financial inclusion among Kenyan youth. The findings revealed that age plays a significant role, with older youth being more likely to be financially included. The relationship with age, however, exhibited a non-linear pattern, as older youth were slightly less likely to be financially included. Education levels were also a pivotal factor, indicating that formal education significantly increased the likelihood of having access to financial products. Higher income levels were positively correlated with financial inclusion, underlining the importance of economic empowerment. Intriguingly, NHIF usage was found to be negatively associated with financial inclusion, suggesting that there may be specific barriers or factors related to health insurance use that need further examination. Policy recommendations include the need for tailored financial education programs, youth-friendly financial products, and support for youth entrepreneurship, with a focus on age-specific financial initiatives to meet evolving needs.

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND

About 75% of over 53 million Kenyans are under 35 years old. (World Bank, 2021). The standard youth age group internationally is 18-35. Despite the country's relatively high economic growth rate, the unemployment rate among young people aged 15-24 years is estimated at 22.4% (Kenya National Bureau of Statistics, 2019). This high youth unemployment has led them to being vulnerable to crime and engaging in unruly behavior, this is according to a report by the International Labor Organization in 2019, which also indicated that Kenya’s youth unemployment rate was at around 22%. It has contributed to significant implications for the financial well-being of the youth, who face numerous challenges in accessing financial services, including credit.

Financial inclusion is defined as "the availability and accessibility of formal financial services and products to individuals, households, and small businesses, regardless of their income levels, geographic location, or other socio-economic characteristics" (Kiprotich et al., 2021). Access to credit is "the ability of people to obtain loans and credit facilities from financial institutions, including banks, microfinance institutions, and other lending institutions, to start and expand their businesses or invest in their education" (Kiprotich et al., 2021). Access to credit is very crucial for the youth as it enables them jumpstart their careers, expand their businesses, invest in their education and acquire marketable skills that will improve their standards of living. Despite its importance, many youths in Kenya are excluded from formal financial systems, with only 11% of youth holding a bank account (Fin Access, 2019).

The determinants of credit access and financial inclusion among the youth in Kenya are complex and multifaceted, and are influenced by a range of socio-economic, cultural, and institutional factors. These factors include income, education, age, gender, geographic location, financial literacy, and social networks (Kiptoo et al., 2021). Other studies have identified additional factors such as religious beliefs, cultural norms, trust in financial institutions, and government policies and regulations (FSD Kenya, 2020).

Studying the determinants of credit access and financial inclusion among the youth in Kenya is important for several reasons. Firstly, it can provide insights into the socio-economic, demographic, and cultural factors that influence financial exclusion and in access to credit among youth in Kenya. Moreover, it can inform the development of evidence-based policies and interventions to promote financial inclusion and increase access to credit for the youth. Nonetheless, it can contribute to the achievement of the United Nations Sustainable Development Goals (SDGs), particularly SDG 8 whose goal is to advance full and productive employment, decent work for all, and sustained, inclusive, and sustainable economic growth. According to the United Nations, one of the targets of SDG 8 is to boost small and medium-sized businesses' access to credit and financial services. In Kenya, the youth represent a significant proportion of the population, and addressing the challenges of credit access and financial inclusion among this group can contribute to the achievement of SDG 8.

Credit access and financial inclusion plays a big role in the economic growth of Kenya. By enhancing access to credit and financial inclusion among the youth, the Kenyan government can promote economic growth and create decent work opportunities. Financially included individuals are more likely to start and grow enterprises, which can lead to the creation of jobs and economic expansion. (Kumar & Prasad, 2020). Moreover, access to credit can enable the youth to invest in education, skills development, and entrepreneurship, which can enhance their employability and income-earning potential (Kabiru, 2017).

Therefore, addressing the challenges of credit access and financial inclusion among the youth in Kenya can contribute to the achievement of SDG 8 and promote sustainable economic growth and development.

The study titled "Determinants of Financial Inclusion among the Youth in Kenya" was conducted in 2019 and sampled 384 youth aged between 18-35 years from Nairobi, Kenya (Obwogi et al., 2019). The study found that financial inclusion among the youth in Kenya is still low and that access to credit remains a significant challenge. The study found that a number of factors, such as a lack of financial education, poor access to financial services, and low financial literacy, all contribute to low financial inclusion. (Obwogi et al., 2019). The study also found that formal financial institutions such as banks are less accessible to the youth, while informal financial mechanisms such as chamas and mobile money services are more popular (Obwogi et al., 2019). The study recommends that financial institutions should create products that address the particular financial needs of young people and also focus on increasing financial literacy among the youth (Obwogi et al., 2019).

1.2 Elements of financial inclusion and access to credit.

There are two types of financial inclusion: formal and informal. The term "formal financial inclusion" is the access of traditional financial services through formal financial organizations like banks, credit unions, and insurance providers. Financial products and services like credit cards, savings accounts, loans, and insurance policies are accessible to both individuals and businesses through this type of financial inclusion. According to a study by the World Bank, formal financial inclusion has been shown to have a positive impact on reducing poverty and increasing economic growth (Demirguc-Kunt et al., 2018).

Informal financial inclusion refers to access to financial services provided by non-traditional financial institutions or services outside of the formal financial sector. Examples of informal financial services include money lending from family or friends, rotating savings and credit associations (ROSCAs), and microfinance institutions. Informal financial inclusion can be particularly important for individuals who may not have access to formal financial institutions due to geographical, social, or economic barriers.

Digital financial inclusion refers to access to financial services provided through digital channels such as mobile banking, internet banking, and e-wallets. This type of financial inclusion can provide greater convenience and accessibility to financial services, particularly for individuals in remote or underserved areas. According to an International Monetary Fund report, digital financial inclusion has been demonstrated to positively affect financial inclusion and economic development in many countries. (IMF, 2019).

Consumer credit refers to access to credit products designed for personal consumption, such as credit cards, personal loans, and payday loans. Consumer credit can provide individuals with access to short-term financing to meet their immediate needs. However, consumer credit can also lead to debt and financial instability if not used responsibly.

Business credit refers to access to credit products designed for small and medium-sized businesses, such as business loans and lines of credit. Business credit can help entrepreneurs and small business owners grow their businesses and create jobs. According to a report by the Small Business Administration, access to credit is a key factor in the success of small businesses in the United States (SBA, 2020).

1.3 Impact of financial inclusion.

The youth of Kenya are significantly impacted by financial inclusion. Access to formal financial services, like bank accounts, credit, insurance, and savings, is made possible for young people through financial inclusion. These services are essential for human development and economic empowerment. The provision of financial services to youth aids in the reduction of poverty, unemployment, and income disparity. According to Osili and Paulson (2018), financial inclusion fosters innovation and entrepreneurship, which in turn spurs economic growth and the creation of jobs. Furthermore, financial inclusion increases access to education and healthcare, promoting growth in human capital.

Financial inclusion benefits both the financial sector and the economy as a whole. Small and medium-sized businesses (SMEs)grow as a result of increased investment and entrepreneurship encouraged by the availability of credit and other financial services and the creation of new job opportunities. Demirguc-Kunt et al. (2018) state that, greater financial inclusion leads to more efficient resource allocation, higher productivity, and a stronger economy.

As per a report by World Bank, Kenya's adult population with a bank account increased from 22% in 2011 to 82% in 2018, with the youth accounting for a significant portion of the increase (World Bank, 2018). According to a study conducted by the Kenya National Bureau of Statistics (KNBS), access to credit is a significant determinant of entrepreneurship among the youth. According to the study, the proportion of youth-owned businesses with credit increased from 7.7% in 2009 to 17.8% in 2014 (KNBS, 2016). Another study conducted by FSD Kenya discovered that access to formal financial services has a positive impact on the livelihoods of Kenyan youth, with those who had a bank account reporting higher levels of income and savings compared to those who did not have an account (FSD Kenya, 2019).

However, it is crucial to note that financial inclusion might not be adequate to address all of the difficulties that the Kenyan youth face. Other elements, such as illiteracy, skill development, and policy frameworks, are also important for promoting inclusive and sustainable economic growth. As a result, financial inclusion should be considered as part of a larger development strategy aiming at empowering the youth and improving their overall standard of living.

1.4 Trends in financial inclusion and credit availability.

The emergence of digital payments and financial services like mobile money, has boosted financial inclusion and access to financial services, particularly in developing nations Kenya included. People can easily access credit by the click of some buttons on their devices at the comfort of their homes. Microfinance institutions have also played an essential role in increasing access to credit for low-income individuals and SME's.

Various governments have implemented measures to promote financial inclusion, such as financial service subsidies, financial education programs, and the formation of financial inclusion task teams. In addition, there has been the emergence of alternative lending platforms, such as peer-to-peer lending and crowdfunding, which has opened new sources of credit for people and small enterprises who may struggle to get traditional bank loans. Impact investing has also been beneficial. It entails investing in firms and initiatives that have a beneficial social or environmental impact, and has grown in popularity as a means of promoting financial inclusion and promoting sustainable development.

In 2019, 42.4% of Kenyan youth aged between 15 and 24 years old had a formal bank account, up from 29.9% in 2016. Additionally, the report shows that the use of digital financial services has significantly increased among the youth, with 67.3% of youth using mobile money services in 2019 compared to 53.4% in 2016. The growth of digital financial services is due to the widespread adoption of mobile phones and the expansion of mobile network coverage in Kenya.

Regarding credit access, the survey finds that the youth are more likely to borrow from informal sources such as family and friends, with just 9.9% reporting having taken out a formal loan from a financial institution. The survey does, however, demonstrate a rise in the usage of digital credit among young, with 14.2% of the youth utilizing mobile credit in 2019 compared to 6.1% in 2016.

These statistics show that Kenya's efforts to improve financial inclusion and credit access among the youth are gaining fruit. Nonetheless, more work remains to be done to guarantee that all Kenyan youth have access to financial services and credit. Governments and financial organizations must continue to strive for greater financial inclusion and access to credit among the youth in Kenya.

1.5 Problem statement.

Kenya's financial sector has undergone major adjustments in recent years in promoting financial inclusion and expanding access to credit among the population. Notwithstanding these efforts, Kenya's youth population continue to face severe barriers to obtaining financial services such as credit, savings, insurance, and other financial products (study by FSD Kenya 2020). Their isolation from the financial system might have serious consequences for their economic prospects and the country's overall economic growth.

Additionally, in Kenya, financial inclusion has been increasing in recent years. However, there are still significant disparities in access to financial services, with young people being one of the groups that are most excluded. According to the 2021 Fin Access Household Survey, only 67.6% of youth in Kenya have an account at a formal financial institution, and only 35.7% have access to credit. The lack of financial inclusion among youth in Kenya has a number of negative consequences which includes reduced economic opportunities, increased vulnerability to poverty, and increased social exclusion.

While considerable study has been conducted in Kenya on the determinants of financial inclusion and access to credit across various sectors of the population, less emphasis has been dedicated to the particular barriers that prevent the youth from accessing financial services. This study aims to address this gap in the literature by studying the determinants of financial inclusion and credit availability among Kenyan youth.

The research study examined the numerous variables that lead to the financial exclusion of Kenyan youth, such as socioeconomic, cultural, institutional, and policy-related aspects. It also investigated and evaluate the various tactics and approaches that have been employed to increase financial inclusion among Kenyan youth.

The findings of this study are expected to contribute to the literature on financial inclusion and credit access among Kenyan youth, as well as provide policymakers, financial institutions, and other stakeholders with insights into the strategies and approaches that can be used to promote their inclusion in the financial system.

1.6 Objective of the Study

This study's primary objective was to look into the factors that influence young people in Kenya's financial inclusion and credit access.

1.6.1 Specific objectives.

1. To analyze the determinant of financial inclusion among the youth cohort.
2. Draw policy suggestions from the findings

1.7 Significance of the study.

The study findings provide policy benchmark that can provide insights challenges that young people face in Kenya in accessing financial services, as well as the factors that contribute to their financial exclusion. The findings can be used to inform policy decisions by financial institutions, the government, and other stakeholders promote financial inclusion among the youth. Equally, by identifying the factors that impede the youth in Kenya from accessing financial services, this study can provide recommendations on strategies and policies that can be used to promote financial inclusion among the youth. This can lead to increased financial literacy, improved access to financial services, and greater participation in the formal economy. And lastly, this study contributes to the existing literature on financial inclusion and access to credit among the youth in Kenya. It can add new knowledge and understanding of the factors that influence financial behavior among the youth and provide recommendations for promoting financial inclusion that can be applied in other contexts.

1.8 Organization of the Paper

This paper is divided into five major sections. Chapter one entails the introduction, chapter two includes the literature review, chapter three highlights the methodology, chapter four discusses the findings while chapter five proposes policy recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section captures the research's theoretical and empirical literature.

2.1 Theoretical literature

According to the theory of financial intermediation, financial intermediaries, such as banks and microfinance institutions, play a critical role in promoting financial inclusion by linking savers and borrowers. Financial intermediaries harness family savings and channel them to borrowers who in turn channel them into productive investments, thereby contributing to economic growth and poverty alleviation.

Income level is one of the most significant factors that influence financial inclusion. The income hypothesis suggests that higher income levels are positively associated with the use of formal financial services, including credit, insurance, and bank accounts (Demirguc-Kunt & Klapper, 2012). According to this theory, people are more likely to use formal financial services and have more discretionary income to save and invest as their income rises. In developing nations, empirical research has revealed a positive relationship between income levels and financial inclusion. (Beck, Demirguc-Kunt, & Honah, 2013). For example, a study in India discovered that households in the top income quintile are 20% more likely to use formal financial services than households in the bottom quintile. (Hazarika & Narayan, 2017).

Income level is a crucial determinant of financial inclusion, as it influences individuals' ability to access and use financial services. Majority of Kenya youth are low-income individuals who often face significant barriers to financial inclusion and access to credit, such as high transaction costs, lack of collateral, and limited financial literacy. This limits their capacity to save, invest, and access credit, thereby perpetuating poverty, income inequality and economic disparity.

However, the income hypothesis has also been criticized for neglecting the fact that low-income youths may face significant barriers to accessing formal financial services, such as high fees, documentation requirements, and geographic distance (Christen, 2011).

Financial intermediaries can play a crucial role in addressing these barriers by providing tailored financial services to youths who generate low income, such as savings accounts, microcredit and insurance products. This would really help promote financial inclusion and support income generating activities that the youth come up with.

In summary, the theory of financial intermediation implies that one of the most important roles that financial intermediaries can play in fostering financial inclusion particularly among low-income youths. By mobilizing savings and channeling them towards productive investments, financial intermediaries can help to promote credit access and financial inclusion among the youth in

Information asymmetry theory links credit access and financial inclusion with education. The human capital hypothesis suggests that education can enhance individuals' financial literacy and enable them to make informed choices regarding financial services and products (Lusardi, Mitchell, & Curto, 2010). The term financial literacy explains the abilities and knowledge that individuals need to manage their financial affairs effectively (OECD, 2016). Empirical studies have found a positive association between education levels and financial inclusion. For example, a study in Ghana found that individuals with secondary education or higher are 10% more likely to use formal financial services than those without formal education (Abor & Quartey, 2010).

This theory suggests that financial markets are often characterized by information asymmetry, which means that one party (e.g., the lender) has more information about the transaction than the other party (e.g., the borrower). This can lead to credit rationing, where lenders, mostly banks and microfinance institutions deny credit to potential borrowers due to the perceived risk of default. Information asymmetry has been a hindrance to a lot of youths by not allowing them to access credit services. Education can help to reduce information asymmetry by providing borrowers with the knowledge and skills necessary for the understanding of financial products and making sound financial: decisions. Youths will need to equip themselves with financial education to help reduce the risk of default and promote financial inclusion.

Transaction cost theory can also be linked with financial inclusion and access to credit among the youth. This theory suggests that financial transactions involve costs, such as search costs, negotiation costs, and monitoring costs. These costs can be particularly high for low-income youths and may prevent them from accessing financial services. Education can help to lower transaction costs by equipping people with the information and skills they need to navigate the financial system and reduce the expenses associated with financial transactions. Education can therefore help promote serve financial inclusion and enhance access to financial services among Kenyan youth.

However, the human capital hypothesis has also been criticized for overemphasizing the role of education in financial inclusion (Collins & O'Rourke, 2017). Education alone may not be sufficient to overcome the structural barriers that the youth face in accessing financial services. For example, financial institutions may require high levels of documentation and collateral the youth may not have. Therefore, financial inclusion policies should aim to provide accessible and affordable financial services that meet the needs of the youth, regardless of their educational background (World Bank, 2015).

Residency is another factor that affects financial inclusion. The urban-rural hypothesis suggests that individuals who live in urban areas are more likely to use formal financial services than those who live in rural areas (Demirguc-Kunt & Klapper, 2012). This is because urban areas tend to have a higher density of financial institutions, making it easier for individuals to access them. In contrast, rural areas may have limited financial services accessibility as a result of inadequate infrastructure and the high cost of serving remote areas. Empirical studies have found that the use of formal financial services is higher in urban areas than in rural areas in many developing countries (Beck et al., 2013). For example, a study in Pakistan found that the probability of using formal financial services is 21% higher for urban households than for rural households (Akram & Hussain, 2017).

New Institutional Economics (NIE) theory suggests that institutional factors, such as legal systems and property rights, can influence economic behavior and outcomes. In the context of financial inclusion, this theory suggests that the regulatory and legal environment in different geographic areas can impact access to credit. For example, in areas with weak legal systems or high levels of corruption, lenders may be less willing to lend money, and borrowers may be less willing to borrow due to concerns about property rights and contract enforcement. Financial literacy programs can help to improve the youths understanding of the legal system and financial contracts, thereby reducing uncertainty and improving access to credit.

Life Cycle Theory of Saving suggests that individuals save and borrow money at different stages of their lives in response to changing needs and opportunities. Youths living in urban areas may have access to more employment opportunities and higher incomes, which can enable them to save more money and access credit. On the other hand, youths living in rural areas may face more limited economic opportunities and lower incomes, which can make it more difficult to save money or access credit. Education can help to promote saving behavior and encourage individuals in rural areas to take advantage of credit opportunities that can help them to invest in income-generating activities.

However, the urban-rural hypothesis has also been criticized for oversimplifying the relationship between residency and financial inclusion (Collins & O'Rourke, 2017). In many cases, even urban areas may have significant pockets of underserved communities, such as slums and informal settlements. Moreover, rural areas may have unique financial needs and preferences that are not adequately addressed by formal financial institutions. Therefore, financial inclusion policies should take a nuanced approach to residency and aim to provide financial services that meet the diverse needs of both urban and rural populations (World Bank, 2015).

These theories have also been criticized for oversimplifying the relationship between these factors and financial inclusion. Therefore, financial inclusion policies should take a multifaceted approach that addresses the diverse needs and preferences of low-income individuals, small businesses, and underserved communities. By doing so, financial inclusion can become a key driver of economic growth, poverty reduction, and social inclusion.

Financial inclusion is important for individuals of all ages, including young people who are just starting their financial journey. There are several variables that can influence financial inclusion among youths, including financial literacy, access to financial services, and socioeconomic background.

Financial literacy is a key variable that can influence financial inclusion among youths. The ability to successfully handle one's personal finances is referred to as financial literacy. Financially literate youth have a higher likelihood of making wise financial decisions, including budgeting, saving, and investing. However, research has shown that financial literacy among youths is generally low (Lusardi, Mitchell, & Curto, 2010). For instance, a study conducted in the United States found that only 17% of high school students were proficient in financial literacy (OECD, 2016). Therefore, improving financial literacy among the youth is critical to promoting financial inclusion.

Access to financial services is another important variable that can affect financial inclusion among youths. The youth may frequently lack access to formal financial services like credit cards and bank accounts. They may find it challenging to establish credit, save money, and make investments in the future as a result. Moreover, youths who do have access to financial services may face barriers such as high fees and minimum balance requirements (Hazarika & Narayan, 2017). Therefore, it is important to increase access to financial services that are tailored to the needs and preferences of youths.

Socioeconomic background is also an important variable that can affect financial inclusion among youths. Youths from low-income families or disadvantaged backgrounds may face additional barriers to financial inclusion. For instance, they may have limited access to financial education or be more likely to live in areas with limited access to financial services. Moreover, they may be more vulnerable to financial stocks, such as job loss or unexpected expenses, which can make it difficult for them to save money and build wealth (Abor & Quartey, 2010). Therefore, it is important to promote financial inclusion policies that target vulnerable youth populations.

2.2 Empirical Literature

One of the factors that have been identified as a significant determinant of financial inclusion in Kenya is income. Low-income earners in Kenya have been found to be less likely to use formal financial services than their higher-income counterparts (Mutai & Kibet, 2020). This is because formal financial services such as banks and insurance companies tend to charge high fees and require high minimum balances, making them unaffordable for low-income earners. As a result, low-income earners are more likely to rely on informal financial services such as moneylenders, which can be expensive and risky.

Another factor that has been found to influence financial inclusion among the Kenyan youth is education.

Studies have shown that higher education levels are associated with a higher likelihood of using formal financial services compared to lower education levels (Wakini & Gichuki, 2019). This is due to the fact that those with greater educational attainment are more likely to be aware of the advantages of formal financial services and are better equipped to navigate the complex financial system.

Religion can have a significant influence on credit access and financial inclusion among youths. Religious beliefs and practices may shape individuals' financial behaviors, affecting their attitudes towards debt, savings, and investment. For instance, some religions may encourage adherents to avoid debt and interest, leading youths to be more cautious in seeking credit from formal financial institutions. On the other hand, certain religious communities may promote cooperative financial arrangements or microfinance initiatives within their congregations, facilitating access to credit for their members. Additionally, religious institutions themselves can play a role in financial inclusion by offering financial education and support to youths within their communities (Gichuhi *et al*., 2018)

Access to technology has also been identified as a determinant of financial inclusion among the Kenyan youths.

Individuals can now obtain financial services more easily thanks to the growing use of mobile phones and the internet, especially in rural areas where there are fewer traditional brick-and-mortar banks (Kuria & Ouma, 2017). Because mobile money services like M-PESA are so widely used, people can now use their phones to conduct financial transactions, which has greatly increased financial inclusion in Kenya.Social and cultural factors have also been found to influence financial inclusion in Kenya. Studies have shown that social networks and cultural norms play a significant role in determining an individual's financial behavior (Njeru, 2021). For instance, individuals who belong to social groups that promote financial literacy and savings are more likely to use formal financial services than those who do not. Cultural norms such as trust and reciprocity also play a role in determining an individual's willingness to use formal financial services.

Access to the National Health Insurance Fund (NHIF) can have a significant impact on financial inclusion and access to credit among youths. In countries where a national health insurance system is in place, such as Kenya, the NHIF can provide youths with access to affordable and comprehensive healthcare services. This access to healthcare coverage can mitigate the financial burden of medical expenses, which often represent a major unexpected cost for young individuals. By reducing the financial strain caused by healthcare costs, youths are better positioned to manage their finances more effectively, allocate funds towards education, entrepreneurship, or other productive activities, and improve their creditworthiness. Moreover, the availability of health insurance coverage through the NHIF may also encourage financial institutions to view insured youths as more reliable borrowers, thus increasing their chances of accessing credit at favorable terms (Mbugua et al., 2019).

Financial inclusion has been linked to poverty reduction, economic growth, and increased access to credit (Aduda, 2019). However, youth, who constitute a significant proportion of the population, face numerous challenges in accessing financial services and products. This literature review aims to identify the determinants of financial inclusion and access to credit among youth globally.

At the broadest level, studies have identified macroeconomic factors that affect financial inclusion and access to credit. For example, financial sector development, economic growth, and political stability have been shown to have a positive impact on financial inclusion (Beck & Demirgüç-Kunt, 2008). Additionally, regulatory and legal frameworks have also been shown to affect financial inclusion (World Bank, 2014). However, these factors are not specific to youth and are beyond the scope of this review.

Moving on to more youth-specific factors, studies have identified education as an important determinant of financial inclusion and access to credit among youth. A study by Waweru and Kibet (2017) found that education level had a significant positive effect on financial inclusion among Kenyan youth. Similarly, another study by Tadesse and Bahiigwa (2015) found that education was positively associated with access to credit among youth in Uganda.

Another important determinant of financial inclusion and access to credit among youth is gender. Studies have consistently shown that females are less financially included than males (Demirgüç-Kunt & Klapper, 2012). A study by Hossain (2018) found that gender disparities in financial inclusion were more pronounced among youth. In Kenya, a study by Waweru and Kibet (2017) found that females were less likely to be financially included than males.

Furthermore, studies have identified income as a key determinant of financial inclusion and access to credit among youth. A study by Attanasio et al. (2011) found that income was positively associated with financial inclusion among youth in Colombia. Similarly, a study by Tadesse and Bahiigwa (2015) found that income level was positively associated with access to credit among youth in Uganda.

In sub-Saharan Africa, financial inclusion is significantly influenced by education. Higher educated people are more likely to have access to formal financial services, according to studies. According to Allen et al. (2017), education is positively correlated with financial literacy, which is a critical factor in accessing and using financial services. This suggests that efforts to promote financial inclusion in sub-Saharan Africa should prioritize education and financial literacy programs.

Age and age squared can significantly influence financial inclusion and access to credit among youths. Research suggests that age has a U-shaped relationship with financial inclusion, wherein the youngest and oldest youths face the most barriers. Younger individuals often lack credit history and formal employment, making them less creditworthy in the eyes of lenders. As a result, they may struggle to access credit and formal financial services. Similarly, older youths might encounter diminishing returns in credit accessibility due to increased responsibilities and perceived risk. On the other hand, age squared represents a non-linear relationship, indicating that there may be an optimal age range within which financial inclusion is highest. This could be attributed to individuals reaching a certain level of financial maturity and stability in their mid to late twenties (Chamboko *et al.*, 2020)

Income is another crucial determinant of financial inclusion in sub-Saharan Africa. Low-income earners have a lesser likelihood of obtaining official financial services than high-income earners. According to the World Bank (2021), over 60% of adults in sub-Saharan Africa are unbanked, and a significant proportion of them are low-income earners. This highlights the need for financial institutions to design products and services that are accessible to low-income earners.

Asset ownership plays a crucial role in influencing financial inclusion and access to credit among youths. Owning assets, such as property, vehicles, or savings, serves as collateral, providing a sense of security to lenders, thereby increasing creditworthiness. Youths who possess assets are more likely to access formal credit facilities at lower interest rates, enabling them to invest in education, start businesses, or engage in income-generating activities. Additionally, asset ownership can enhance financial inclusion by improving youths' credit history, demonstrating their ability to manage financial responsibilities effectively. Conversely, those without significant assets may find it challenging to access credit from formal financial institutions, leading them to rely on informal sources that often impose higher interest rates and less favorable terms (Gichuhi *et al.*, 2018)

Financial infrastructure is also an essential determinant of financial inclusion in sub-Saharan Africa. The lack of formal financial institutions and services in rural areas and remote communities' limits access to financial services, particularly among rural populations. Gakinya et al. (2020) claim that the growth of mobile money services has made a substantial contribution to financial inclusion in sub-Saharan Africa, particularly in rural areas where traditional financial institutions are scarce.

2.4 Overview

Empirical literature reviewed demonstrates that few studies have attempted to delve into what influences young people in Kenya's financial inclusion and credit access. Furthermore, the findings are not clear on which factors significantly contribute to youth exclusion in the Kenyan credit market. However, most studies identify age, age squared, gender, education level, asset ownership, income, religion, and access to NHIF as potential determinants of financial inclusion. This paper, therefore used the Fin Access 2021 latest dataset to infer causality on factors that determine financial inclusion and access to credit among the youths in Kenya.

CHAPTER THREE.

INTRODUCTION

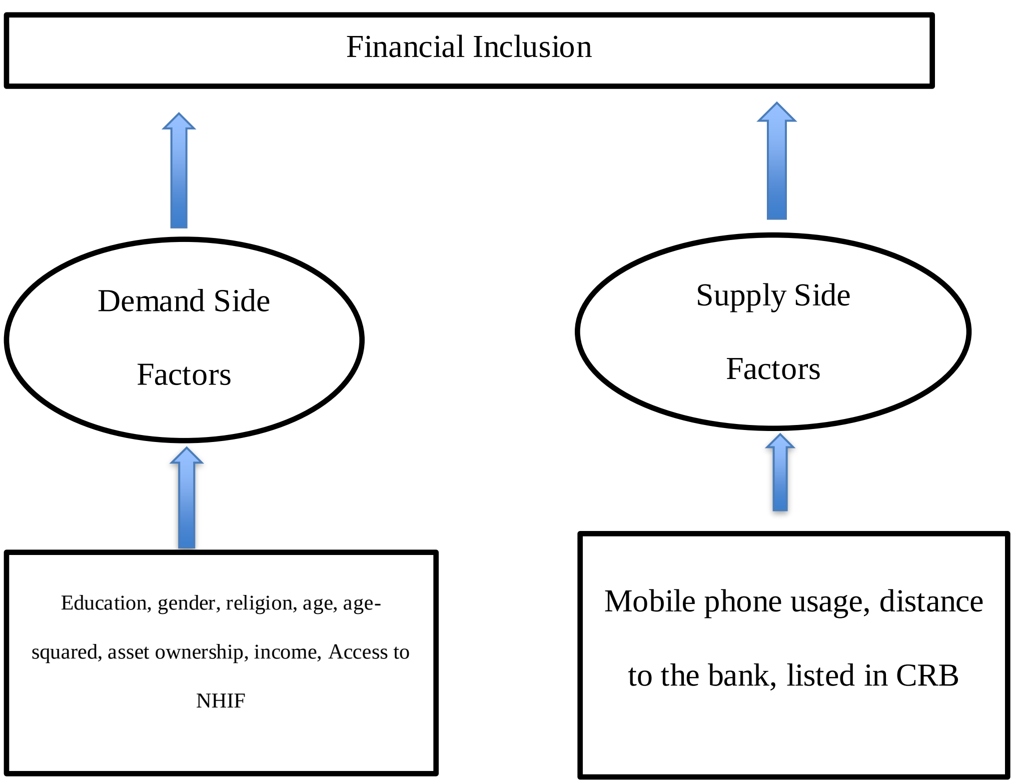
3.0 Introduction

Chapter three outlines the analytical approach employed to investigate factors that influence the financial inclusion and access to credit among the youth in Kenya. This chapter provides an overview of the theoretical framework guiding the study, the empirical model used, and a description of the variables along with their sources of data.

3.1 Conceptual framework

The nexuses between financial inclusion among the youths and the determinant is conceptualized in Figure 1. A number of variables that influence financial inclusion among the youths include: education, age, age squared, gender, asset ownership, religion and access to NHIF.

Figure 1: Conceptual framework



3.2 Empirical Model

The logit model was used in this study to understand the factors that influence financial inclusion among Kenyan adolescents. The binary response character of financial inclusion informs the use of logit models. Either youths are financially included or they are not. This phenomenon can be expressed numerically as:

$$Y_i = \beta X_i + U_i \tag{1}$$

Let y* be an unobserved variable and specified as; $y = 1\ if\ y^* > 0\ and\ y = 0, otherwise\ if\ \ if\ y^* \leq 0$
This suggests that y indicates the teenagers' level of financial inclusion (y=1 if they are, 0 otherwise). Equation 1 shows a binary choice model where the likelihood of young people becoming financially included is estimated while including explanatory variables defined by X. The mathematical notation is as follows:

$$Prob(Y_i = 1) = F(\beta' X_i) \tag{2}$$

$$Prob(Y_i = 0) = 1 - F(\beta' X_i) \tag{3}$$

Where: Y_i represents the observed outcome for the X_i person who is either financially included or excluded. This suggests that Y_i = 1 for financially included youth and Y_i = 0 for financially excluded youth. The probability of young people becoming financially included is determined by a set of independent variables called X_i which includes factors like education level, gender, age, and work status connected with the i_{th} person. The function F may be represented as a probability function. P is estimated by logistic cumulative distribution function as in equation 4:

$$P(Y = 1) = \frac{e^{\beta' X}}{1 + e^{\beta' X}} \tag{4}$$

$$P(Y = 0) = 1 - \frac{e^{\beta' X}}{1 + e^{\beta' X}} = \frac{1}{1 + e^{\beta' X}} \tag{5}$$

$$E\left(\frac{Y}{X}\right) = 1[F(\beta' X_i)] + 0[1 - F(\beta' X_i)] = F(\beta' X_i) \quad (6)$$

Because the model is non-linear, the parameters are not always the marginal effects of the different independent variables. Equation (7) is produced by differentiating equation (6) with respect to X_{ij} to determine the relative impact of each home attribute on the likelihood that youths would be financially included (Greene, 2003):

$$\frac{\partial P_i}{\partial X_{ij}} = \left[\frac{\epsilon^{\beta' X}}{(1 + \epsilon^{\beta' X})2}\right]\beta = F(\beta' X)[1 - F(\beta' X)]\beta \quad (7)$$

Estimation technique therefore involved the maximum likelihood method. Since heteroscedasticity affects Linear Probability Model (LPM), use of maximum likelihood method mitigates this potential econometric problem. The empirical model for the logit estimation is specified as follows:

$$log \frac{P_i}{1 - P_i} = \delta + \beta X_i + U_i \quad (8)$$

$log \frac{P_i}{1-P_i}$ = The log-odds in favor of financial inclusion of Kenyan youths

Where X_i is defined as age, age-squared, gender, education, asset ownership, religion, access to NHIF, and income.

Analytical model therefore becomes:

$$FINC_i = \beta_0 + \beta_1 Age_i + \beta_2 Age\_Sqr_i + \beta_2 Gender_i + \beta_3 Ed_i + \beta_4 Asset_i + \beta_5 Income_i + \beta_6 Rel_i + \beta_7 NHIF_i + U_i \quad (9)$$

3.3 Variable description measurement and sources

The Kenya Financial Access Household Survey 2021 was the source of the data for this study. The data was jointly collected by KNBS, FSD and CBK.

Table 1: Variable definition, measurement and source

Variables	Definition and measurement

$FINC$	This is the dependent variable that assesses the youths' level of financial inclusion. It captures whether the youths have access and usage of financial products. *It is measured as dummy* with value 1 if the youth has access to financial products or zero otherwise
Age	This is the age of the youths and is measured in numerical value
Age_sgr	Age squared that captures non-linearity relationship between age and financial inclusion of the youths
Gender	This is the gender of the youth. It is measured as a dummy where Youth Gender = $\{1, \quad if\ the\ youth\ is\ a\ \ male\ \ 0, \qquad otherwise$
Ed	This is the education level of the youth, it is a categorical variable measured as: 0=Noneducation, 1=Primary, 2=Secondary, 3=Tertiary
Asset	This captures the asset ownership status of the youth. It is measured as a dummy where Asset ownership = $\{1, \quad if\ the\ youth\ owns\ an\ asset\ \ 0, \qquad otherwise$
Income	This measures the income of the youth and it is a continuous value
Rel	This is the religious status of the youth. It is a dummy assuming the values Religious status = $\{1, \quad if\ Christian\ 0, \qquad otherwise$
NHIF	Captures the NHIF status of the youth. Whether the youths actively use NHIF NHIF usage = $\{1, \quad if\ youths\ use\ NHIF\ 0, \qquad otherwise$

3.3 Diagnostic tests

Heteroscedasticity

This is a common problem in a cross-sectional data which we shall use in this study. By definition, a data set is said to be suffering from heteroscedasticity if error term has a non-constant variance characteristic across the observation. Its presence may render inconsistent estimates which are not reliable. Thus, in this study, we shall test for the presence of heteroscedasticity using Breusch-Pagan- Godfery test. If heteroscedasticity is present, we shall use the robust standard errors.

Multicollinearity

Multicollinearity is a major problem among cross sectional data such as the one that shall be used in this study. It refers to a situation one or more explanatory variables are a linear combination of the other explanatory variable. If multicollinearity is a serious problem, the resultant coefficient estimates are biased leading to conclusions results. We shall utilize Variance inflation factor (VIF) to test for the presence of multicollinearity. Variables with High VIF of over 10 shall be dropped from the model.

CHAPTER FOUR

ANALYSIS AND RESULT

4.1 Introduction

The focus of this chapter is on inferential statistics in conjunction with descriptive analysis. Descriptive statistics details the mean of the observations alongside the standard deviations while inferential statistics report the probability regression of odd ratios and marginal effects.

4.2 Descriptive statistics

An overview of the various variables for this study are presented by the descriptive statistics in Table 1. On average, youths who are financially included are 85.12%, with a standard deviation of 0.3559. The mean age of youths is approximately 25.815, with a standard deviation of 5.7444. The minimum age of the youths considered in this study is 16 and also with oldest being of 35 years of age. On the average, 41.24% of the youths are male while female sample constitute 58.76%. On average, the income for the youths is approximately 7002.41, with a relatively high standard deviation of 9960.89, indicating a wide income distribution in the sample. Majority (83.08%) of the youths are Christians. A paltry 15.12% of youths are currently using NHIF.

Table 1: Descriptive statistics

Variable	Obs	Mean	Std.dev.	Min	Max
Financial Inclusion	11,519	0.851202	0.355904	0	1
Age	11,519	25.81491	5.744407	16	35
Age squared	11,519	699.4052	295.6616	256	1225
Gender (Male=1, 0 otherwise)	11,519	0.412362	0.492281	0	1
No education	11,507	0.114105	0.317952	0	1
Primary level	11,507	0.350048	0.477005	0	1
Secondary level	11,507	0.390458	0.487874	0	1
Tertiary	11,507	0.14539	0.352509	0	1
Income	11,519	7002.413	9960.892	98	200000

Religion (Christians=1, 0 otherwise)	11,519	0.830801	0.374944	0	1
NHIF Usage	11,519	0.151228	0.358287	0	1

4.3 Correlation analysis

In Table 2, a correlation analysis is presented for various variables related to financial inclusion and access to credit among the youth in Kenya. This analysis assesses the relationships between these variables, providing valuable insights into the factors influencing credit accessibility and financial inclusion among the Kenyan youth. Financial inclusion shows a positive correlation with income (0.178) and NHIF usage (0.157). This suggests that higher income and utilization of the National Health Insurance Fund are positively associated with greater financial inclusion among Kenyan youth.

The "Age" variable exhibits a positive correlation with "Income" (0.207) and "NHIF Usage" (0.174). This indicates that as the age of the youth increases, there is a tendency for their income and NHIF usage to increase as well.

Furthermore, the analysis highlights the influence of education levels on financial inclusion and access to credit. "Secondary level" education displays a strong negative correlation with "Financial Inclusion" (-0.330), suggesting that as the level of secondary education increases, financial inclusion tends to decrease. This could be an important finding for the thesis, indicating that there may be specific challenges or barriers related to secondary education that affect financial inclusion among Kenyan youth.

In summary, the correlation analysis provides valuable insights for this study. It suggests that factors such as income, age, NHIF usage, and education levels, particularly secondary education, play a significant role in shaping financial inclusion outcomes.

Table 2: Correlation Analysis

	Financial Inclusion	Age	Age squared	Gender	Primary level	Secondary level	Tertiary	Income	Religion	NHIF Usage
Financial Inclusion	1.000									
Age	0.377	1.000								
Age squared	0.344	0.995	1.000							
Gender	-0.022	-0.052	-0.045	1.000						
Primary level	-0.033	0.108	0.115	-0.010	1.000					
Secondary level	-0.034	-0.259	-0.254	0.048	-0.587	1.000				
Tertiary	0.163	0.081	0.064	0.026	-0.303	-0.330	1.000			
Income	0.178	0.207	0.198	0.113	-0.148	-0.065	0.319	1.000		
Religion	0.044	0.012	0.009	-0.012	0.056	0.123	0.111	-0.051	1.000	
NHIF Usage	0.157	0.174	0.166	0.057	-0.131	-0.018	0.319	0.396	0.084	1.000

4.4 Regression analysis

In Table 3, a logistic regression output is presented, which is a crucial part of the analysis for the study on the determinants of credit access and financial inclusion among Kenyan youth. The regression result shows that age is a significant determinant of financial inclusion among the youths in Kenya. In particular, as age increases, the likelihood of financial inclusion among the youths increases by 6.12%. However, the non-linear relationship between age squared and financial inclusion among the youths in Kenya is negative. This implies that youths are 0.1% more likely to be financially excluded as they add more years. Education attainment is a significant variable that determines financial inclusion. And credit access among the youths in Kenya. Youths with primary, secondary, and tertiary level of education are 5.42%, 8.06% and 8.68% respectively are more likely to have access to financial product that youths without any formal level of education. Also, income significantly contributes financial inclusion among the youths in Kenya. Youths are more likely to be financially included as their income increases. However, NHIF usage among the youths in Kenya is associated with financial exclusion. In particular, youths who use NHIF are 0.64% less likely to be financially included.

Table 3: Regression output

VARIABLES	(odd ratio) financial inclusion	(Marginal effect) financial inclusion
age	3.202***	0.0612***
	(0.1729)	(0.00431)
age squared	0.9808***	-0.0010***
	(0.0010)	(0.00008)
gender	0.998	-0.0001
	(0.0648)	(0.0034)
Primary level	3.185***	0.0542***
	(0.3188)	(0.0049)
Secondary level	5.302***	0.0806***
	(0.568)	(0.00627)
Tertiary level	34.124***	0.0868***
	(10.125)	(0.0043)
Income	1.000***	4.84e-05***
	(8.64e-06)	(0.000)
religious status	0.881	-0.0064
	(0.0758)	(0.00423)
NHIF usage	3.445***	-0.0064***
	(0.7078)	(0.0042)
Constant	0.0016***	
	(0.656)	
Observations	11,507	11,507

Logistic regression Number of obs = 11,507
LR chi2(9) = 2986.60
Prob > chi2 = 0.0000
Log likelihood = -3346.374 Pseudo R2 = 0.3086

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provided an overview of the empirical findings and offered conclusions. The areas for future research and the policy implications of the findings were also provided

5.2 Summary of empirical findings

The objective of the research revolves around determining the variables that affect this particular demographics' financial inclusion and credit accessibility. The descriptive statistics provided an overview of the sample. It revealed that, on average, 85.12% of the Kenyan youth in the study are financially included. The average age of the youth is approximately 25.815 years, with a significant age range from 16 to 35 years. Gender distribution shows that 41.24% of the youth are male, while 58.76% are female. The average income for the sampled youth is around 7,002.41, but the high standard. Additionally, 83.08% of the youth in the sample follow the Christian religion, and only 15.12% are currently using the National Health Insurance Fund (NHIF).

The logistic regression output is a critical part of the study, providing insights into the determinants of financial inclusion among Kenyan youth. Age was identified as a significant determinant of financial inclusion. As youth's age increases, their likelihood of financial inclusion also increases by 6.12%. However, a negative non-linear relationship exists between age squared and financial inclusion, indicating that as youth grow older, there's a slight decrease in their likelihood of being financially included. Education levels played a pivotal role. Youth with primary, secondary, and tertiary education levels were

5.42%, 8.06%, and 8.68% more likely to have access to financial products compared to those without formal education. Higher income levels positively contributed to financial inclusion. In contrast, NHIF usage was associated with financial exclusion, as youths who used NHIF were 0.64% less likely to be financially included.

5.3 Conclusions

In conclusion, age emerged as a significant determinant of financial inclusion among Kenyan youth. As youth grow older, their likelihood of being financially included increases. However, this relationship is not linear, as older youth are slightly less likely to be financially included. Equally, Education plays a pivotal role in financial inclusion. Youths with primary, secondary, and tertiary education are substantially more likely to have access to financial products compared to those without any formal education. These findings highlight the importance of educational initiatives to improve financial inclusion. Higher income levels positively contribute to financial inclusion. As youth's income increases, their likelihood of being financially included also rises. This underscores the need for policies and programs that aim to boost the economic well-being of Kenyan youth. Surprisingly, utilization of the National Health Insurance Fund (NHIF) is associated with financial exclusion. Youths who use NHIF are less likely to be financially included. This could be due to competing financial priorities or factors specific to NHIF usage that require further investigation.

5.4 Recommendations

The following policy recommendations are made by the study:

1. **Financial Education Programs:** Implement comprehensive financial education programs targeting Kenyan youth. Topics like entrepreneurship, investing, saving, and budgeting should all be included in these educational programs. The creation and implementation of these initiatives

can involve cooperation between financial institutions, governmental bodies, and nonprofit groups.

2. **Tailored Financial Products:** Encourage financial institutions to design and offer financial products tailored to the specific needs and preferences of Kenyan youth. These products should consider factors like educational attainment, income levels, and age to ensure accessibility and relevance.
3. **Promote Youth Entrepreneurship:** Support youth entrepreneurship by providing access to start-up capital, mentorship, and training. Entrepreneurship can be a powerful vehicle for financial inclusion, and initiatives that foster a culture of entrepreneurship among Kenyan youth should be encouraged.
4. **Access to Credit:** Enhance access to credit for Kenyan youth, which can empower them to start businesses, invest in education, and improve their financial well-being. Government and financial institutions can work together to provide youth-friendly credit products with reasonable terms and conditions.
5. **Age-Related Financial Initiatives:** Develop age-specific financial initiatives that recognize the evolving financial needs and behaviors of Kenyan youth as they grow older. Tailor financial services and education to cater to the changing priorities and circumstances of youth at different life stages.

5.5 Areas for further study

Building on the findings and insights from this study on the factors influencing credit access and financial inclusion among Kenyan youth, there are several areas for further research that could expand our understanding of financial inclusion and its impact on youth. Future studies should conduct longitudinal studies to track the financial behaviors and experiences of Kenyan youth over an extended period. This would provide a deeper understanding of how financial inclusion evolves over time and how it influences their economic well-being. Lastly, investigate regional or geographic variations in financial inclusion among Kenyan youth. Analyzing differences in urban and rural areas or among different counties can reveal unique challenges and opportunities for financial inclusion.

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