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Factors That Influencing Financial Inclusion in Ethiopia

By

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Declaration

This is to certify that this thesis is my original work and has not been presented for a degree in any other university, and all sources of material used for the thesis have been properly indicated and acknowledged by means of complete references.

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Signature: -

Date: 22November 2022

Place: Addis Ababa University College of Development Studies, Center for Regional and Local Development studies

This is to certify that this thesis entitled 'Factors that influencing financial inclusion in Ethiopia, Addis Ababa, Ethiopia' submitted in partial fulfilment of the requirements for the award of the degree of Master of Art in Regional and Local Development studies to graduate program of collage of Development studies, Addis Ababa university by Tsega Zeraiy is an original work conducted by the candidate under my supervision and this project work has not been submitted earlier for award of any degree or diploma to the best of our knowledge and belief.

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Abstract

This paper examined the factors that affect financial inclusion in Ethiopia as well as the degree of financial inclusion in general and in relation to a few key attributes. To address the objectives of the study, secondary data from the World Bank's LSMS (Ethiopia Socioeconomic Survey Data, 2018/19) were used. After the raw data was cleared, the collected data was analyzed using the binary logistic regression model to assess the influence of various socioeconomic and demographic factors on having or not having a bank account, which is a proxy for financial inclusion in this study. According to the findings, respondent age, gender, whether they live in rural or urban residence, marital status, respondent awareness of formal financial institutions, savings states, poverty level, distance to the bank agent from the respondent's living area, and whether they live in the Amhara, Gambella, or Harer regions all have a significant impact on account ownership. However, account ownership is not significantly impacted by the response to shock remittance, credit availability, and education level. Based on the findings above, this study recommends that government and private financial institutions work together to address the root causes by closing the gender gap, encouraging savings, expanding the financial sector to all regions, and shortening the distance to financial institutions. In general, the government and financial institutions must work together to eradicate financial exclusion and make the financial sector more inclusive.

Keywords: Ethiopia; financial inclusion; financial institution; socioeconomic; demographic; logit regression

1.CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Financial inclusion refers to the availability of practical and reasonably priced financial goods and services for individuals and enterprises, including transactions, payments, savings, credit, and insurance, that are provided in a responsible and sustainable manner (World Bank, Financial Inclusion 2022). Financial access makes daily life easier and helps in long-term planning for both families and enterprises, as well as for unexpected events.

Having access to a transaction account is the first step toward greater financial inclusion since it enables people to keep money and send and receive payments. A transaction account acts as a doorway to other financial services. Account holders are more likely to use additional financial services like credit and insurance to launch and grow enterprises, make investments in their children's or own health or education, manage risk, and recover from financial losses, all of which can enhance their overall quality of life.

Globally, financial inclusion is increasing, driven by mobile technology and the internet, although progress has been unevenly distributed throughout nations. According to a recent World Bank analysis of financial service usage, men continue to be more likely than women to have an account. Worldwide, 3.8 billion adults now have a bank or mobile money account, which is a necessary first step toward eliminating poverty. This is equivalent to 69% of the adult population, which is an increase from just 51 percent in 2011 and 62 percent in 2014. According to the Global Findex database, 515 million adults opened an account between 2014 and 2017, while 1.2 billion did so since 2011. Account ownership has risen in some countries but decreased in others, often because of large disparities between the rich and the poor and between men and women. The gender gap in developing economies was around 9 percent until 2011. There were 1.7 billion people worldwide without access to a bank account in 2017. About half of them were female and either unemployed or from rural households living in poverty (Findex data, 2021).

Despite recent progress in Africa toward financial inclusion, there is still a significant gap between the developed and developing worlds. Additionally, there are differences in financial inclusion rates amongst African nations, with Southern Africa reporting a level of 51% and Central Africa reporting a level of 11%. In some nations, 95 percent of adults lack formal

financial accounts as of 2012. Only one person out of four has a formal account, and men, the wealthy, and those with higher levels of education are more likely to have a bank account (Demirgüç-Kunt&Klapper, 2012b). With income and education having a stronger influence, men who are wealthier, more educated, and older favor financial inclusion in Africa. 2016 (Zins & Weill). Particularly in Eastern Africa, new financial services like mobile payment systems and mobile banking have partially filled gaps in financial inclusion, particularly those linked to economic status and gender (Mlachila2016).

Financial inclusion in sub-Saharan Africa was fueled by mobile money. While the proportion of adults having a bank account stayed the same, the proportion with a mobile money account nearly doubled to 21 percent. Mobile money accounts have expanded from East Africa to West Africa and elsewhere since 2014. There are eight economies in the region: Burkina Faso, Côte d'Ivoire, Gabon, Kenya, Senegal, Tanzania, Uganda, and Zimbabwe, where 20% or more of adults only utilize mobile money accounts. Up to 95 million unbanked individuals in the region receive cash payments for agricultural products, and over 65 million save using semiformal techniques, so there are several opportunities to boost account ownership.

According to the World Bank, only 35% of Ethiopian adults had a bank account in 2017, falling behind neighbors like Kenya, where the percentage is 82%. By 2017, the country had 50.7 million accounts, up 31% over the previous year. The major financial institutions operating in Ethiopia are banks, microfinance institutions, and insurance companies. Currently, there are 29 commercial banks, one development bank, 40 microfinance institutions (MFIs), and 18 insurance companies operating in Ethiopia. The number of deposit accounts has increased from 40.04 billion birr to 83.3 billion birr. Hence, the total deposits, over the last four years have increased from 899 billion in 2019 to 1.7 trillion Birr in 2022 (National Bank of Ethiopia, 2022). Furthermore, 60% to 70% of Ethiopians are denying from usingformal financial services (Samuel Getachew, 2020).Therefore, as Ethiopia is a developing nation, it is essential to address the high incidence of financial exclusion in areas like age, age square, gender, region, residence, marital status, remittances, savings, poverty level, education, financial literacy, credit access, response to shock, and distance to the formal financial sector with respect to account ownership. since it has a big impact on a nation's economic development, which is all emerging nations' objective.

1.2 Statement of the problem

Economic growth is impacted by financial inclusion. It promotes saving and investment, which increases the economy's financial resources, which are mostly accounted for by growth in GDP per capita and support the economy. Through its direct effects on expanding loan availability, liquidity, aiding people in adjusting their consumption during shocks, and investment, as well as through its indirect effects on lowering unemployment, decreasing income inequality, and eradicating poverty, as well as on enhancing welfare and the financial industry (Beck et al., 2007). It's also a useful tool for addressing the underprivileged. Researchers discovered a link between financial advancement and economic expansion (Levine, 2005,Demirguc-Kunt& Levine, 2008). This is particularly important in developing countries and emerging economies, where banking penetration rates are typically low. This is mostly a result of traditional factors like being a woman, living in a rural area, a low salary, and having little formal education. Studies indicate that Ethiopia has a statistically significant financial gender gap. Financial inclusion is more influenced by age, employment, and education(Daniel and shemelis 2021).

In Ethiopia, just 35% of adults have accounts with banks or other types of formal financial institutions, and only 5% of adults have mobile bank accounts (Kappeler., 2018). When compared to its surrounding nations, this is rather low. For instance, 82% of adults in Kenya and 50% of adults in Rwanda, respectively, have an account. (Mengistu Bessir,2018). Based on statistics from 2011 to 2017 (2017- Country Rankings), Ethiopia is ranked 102 out of all countries by the percentage of its population with a bank account, which is lower than the global average of 58.52 percent.

The gender gap is that in 2017, 41% of men have an account, compared to 29% of women, whereas in 2014, account ownership was essentially even, with 23% of men and 21% of women having an account. In three years, account ownership among men has nearly doubled, although it has only climbed by eight percentage points among women(Mengistu Bessir,2018).

The scope of the financial institutions in Ethiopia is similarly very limited, and concentrations are considerable. 34.1% of banks are located in Addis Ababa, and the ratio of branch per population reached to 1: 11, 516 (one bank branch serves 11, 516 people). Public banks collectively control 31% of bank branches and 51% of banking capital(National Bank of

Ethiopia, 2022).As of Ethiopia is a developing country it's very important and helpful to assess the factors that explain the current low level of the financial inclusion.

1.3 Objectivesof the study

Main objectives

- The main objective of this study is to assess the factors that explain the low-level financial inclusion in Ethiopia.

Specific objectives

- To identify the current level of financial inclusion in general and with some specific attributes.
- To investigate the associations between different socioeconomic and demographic characteristics and financial products and services.
- To investigate perceived barriers to financial inclusion in Ethiopia.

1.4 Significance of the study

Better financial inclusion contributes to the economic improvement of a country, and since Ethiopia has a low level of financial inclusion, it's very vital to recognize the main driving factors and address the root causes. This study primarily assesses the factors that influence the level of financial inclusion or exclusion;It bring new findings and identify gaps for further engagement, it can be an input for future policymakers and the implementation of policy. This study can also be used to see if the factors and barriers to financial inclusion have changed over the past few years.

1.5 Scope of the study

This study only assessed Factors that influencing financial inclusion in Ethiopia, using fourteendeterminates. the study is represented nationally which cover all the country's urban and rural area and all the regions.

1.6 Limitations of the study

This study only assesses account ownership, which is the dependent variable that stands for financial inclusion. In terms of some factors in Ethiopia, it didn't assess the use of a formal financial account to save or the use of financial products and services. Some account holders may not use it at all, while others may only use it to save. additionally due to a security issue at the time of data collection it was not possible to interview some people.

1.7 Organization of the study

The rest section of study is organized as follows: chapter two analyzed the relevant literature, Chapter three discusses the study's methodology and sampling concerns, Chapter four provides both the descriptive and empirical analyses, and Chapter five concludes the study with specific policy recommendations.

2 Chapter Two: Literature Review

2.1. Theoretical Review

2.1.1Concepts and definitions related to financial inclusion/Exclusion

Even if financial inclusion doesn't have a generally accepted definition, it is very essential to explain financial inclusion to discover the main factors that caused the low levels of access to the financial system and to create a conceptual framework. As measuring financial inclusion is very difficult, it is generally defined as exclusion from the financial system. The early discussion of financial exclusion was on social exclusion that primarily focused on geographical access to financial services, specifically on banking. But financial exclusion is not only about physical access to financial services. Thus, the discussion became wider to incorporate all types of people who have no or tiny use of financial services and the processes of financial exclusion. *(Ford and Rowlingson, 1996)*

Many definitions of financial inclusion or exclusion have been created throughout the years, the most prominent of which is

Asian DevelopmentBank(2000):-

Financial inclusion is described as the provision of a range of financial services to poor and lowi ncome household, including deposits, loans, payment services, money transfers, and insurance.

Stephen P. Sinclair (2001): - financial exclusion is failed to gate a financial service in an applicable way due to low access, weak conditions, high prices, lack of marketing and self-exclusion due to unfavorable perception.

(Das, 2015): - Financial inclusion refers to the provision of affordable financial services to large segments of the underprivileged and low-income population. Credit, savings, insurance, and payment and remittance services are among the various financial services. Financial inclusion aims to expand the organized financial system's activities to include low-income individuals within its purview. There are numerous benefits to having an inclusive financial system. First, it makes it easier to allocate productive resources in an effective manner. Second, having access to suitable financial services can considerably enhance how money is managed daily. Third, a financial system that is open to everybody can aid in limiting the expansion of exploitative informal loan sources like moneylenders. Thus, an inclusive financial system improves

efficiency and welfare by facilitating a wide range of effective financial services as well as avenues for safe and secure saving practices.

(Fitzgerald, 2006):-An economy needs inclusive growth in order to develop sustainably. Inclusive growth refers to the poor, vulnerable groups, and lagging sectors having simple, secure, and cheap access to credit and other financial services, which are recognized as the drivers of economic growth and lowering income disparities, thus reducing poverty. Numerous studies have acknowledged the link between financial development and growth, although there is disagreement over the direction of causality.

*United Nations (2006 b):-*financial inclusion is a financial system in which all credit-eligible people and businesses can obtain credit; all insurance-eligible people and businesses can obtain insurance, and everybody can access savings and payment services." Everyone who qualifies should have access to all services, even though they are not required to use them. This is the main goal of inclusive finance.

*(Meadows and Cook, 2004): -*The ownership or access to certain financial products and services is typically the subject of working or operational definitions of financial exclusion. The main area of concentration is the goods and services offered by the major financial service companies. These financial products might include savings, house insurance, short- and long-term credit, and money transfers

(Rajan, 2009): - The group in society that cannot obtain timely credit or other financial services in the right form from formal sources is financially excluded, which raises issues for policymakers. Therefore, having access to banking services, having access to affordable and timely credit, and having access to financial literacy programs that teach individuals about a healthy financial life are the three key components or dimensions of financial inclusion. Another definition of financial inclusion is the provision of banking services at reasonable prices (Leeladhar,2005).The financial Services include a wide range of financial services, such as credit, insurance, and additional equity-based goods.

(World Bank 20081):- Thus, having access to financing helps impoverished people and small businesses have more chances, which in turn promote economic growth, the eradication of poverty, and the reduction of income disparity. When there is financial market friction, financial exclusion forces those deserving poor people to use their own resources to invest in their children's education, their own health, and to launch (expand) their own enterprises. This leads to a persistent poverty trap and income inequality.

2.2 Empirical review

2.2.1 Discussions and reviews of related research findings from abroad

*Efobi et al. (2014)*investigated the variables affecting bank service usage and access in Nigeria. The findings show that the use of bank services in Nigeria is significantly influenced by personal characteristics, income, and ICT propensity.

*Fungacova and Weill (2015)*conducted research on China's understanding of financial inclusion. It was noted that China's degree of financial inclusion is strongly impacted by the growing use of formal accounts and formal savings. Other determining criteria, such as higher wealth, better education, being a man, and age, have been strongly associated with the usage of formal credit and bank account ownership in China.

*Allen et al (2012)*examined that affordable costs and being closer to financial intermediaries are linked to increased account ownership and usage. The most effective programs to encourage financial inclusion among individuals who are likely to be excluded are lower-fee accounts, exempting some depositors from verification requirements, permitting comparable banking, and utilizing bank accounts to receive government benefits.

*Demirguc-Kunt and Klapper (2013)*stated that financial inclusion is measured by the variation in financial service usage between and within nations. It was noted that opening an account at a financial institution acts as a gateway into the formal financial industry. It is possible to save a significant amount of money and yet have access to credit from financial organizations. Accounts, savings, and credit have been found to distinguish between different countries' levels of financial inclusion. Additionally, it was discovered that the usage of official and informal

credit and saving mechanisms by the rich and poor within nations varied and that account ownership was influenced by personal income levels.

*Kumar (2013)*study at the state of financial inclusion and offers evidence of its causes. It has acknowledged that branch net penetration is a crucial factor affecting financial inclusion. The percentage of factories and the employment base are the main predictors of the financial inclusion index's penetration. The significance of a region's socioeconomic and environmental associations in influencing the general public's banking behaviors in India was discovered. Additionally, it has been found that the growing branch network has a significant impact on financial inclusion.

According to *Kohli (2013),*there are several elements that can improve financial inclusion in India. According to the author, there is a close correlation between financial inclusion and levels of human development in India. The degree of financial inclusion in India was shown to be impacted by socioeconomic features and individual income levels. On the other hand, it was discovered that both technology and understanding of banking services had a substantial impact on financial inclusion in India.

*Bhanot et al. (2012)*conducted research on the phenomena of financial inclusion in two north-eastern Indian states, Assam, and Meghalaya. Bhanot have tried to investigate the numerous elements that are essential for figuring out financial inclusion in rural parts of India.

According to the study's findings, there was relatively little financial inclusion in these rural areas of India. Financial inclusion was found to be influenced by the individuals' economic status, educational status, knowledge of self-help groups (SHGs), and awareness of financial products from various sources. Additionally, it was discovered that accessibility to financial institutions like banks and post offices fosters financial inclusion. Government assistance in plain areas was found to have an impact on financial inclusion while other factors, such as location and government support, were not found to have such an impact.

*Gupte et al (2012)*highlighted important variables used to calculate the financial inclusion index in the context of India. To generating the financial inclusion index, the researcher considered four crucial dimensions. The usage dimensions include the number of accounts (deposits & loans per 1000 people), geographic branch penetration, geographic ATM penetration, and volume of deposits and loans. The computation of financial inclusion in India was found to be determined by the ease of transaction dimension and the cost of transaction dimension, which cover things

like annual fees charged to bank customers for using ATM cards or the price of foreign money transfers. Geographic branch outreach penetration and ATM penetration were determined to be key factors in improving financial inclusion in the setting of India.

*Sharma, 2008; Gupte et al., 2012; and Arora, (2012)*examined the scope and factors that influenced financial inclusion in India depended on secondary data that was accessible through the RBI data source. Sharma tried to research the "index of financial inclusion" and considered three fundamental aspects of the index for a system that includes everyone. 1. Bank infringement (indicated by people having several bank accounts), 2. The accessibility of banking services (represented by the ratio of bank staff to customers) and 3. Use of the financial system (as measured by credit and deposit volume.

2.2.2 Review and Discussions of similar Research Findings in Ethiopia

Esmael Abdu and Mohammad Adem (2021) did a study on the determinants of financial inclusion in the Afar region and found that financial inclusion increases with age until it reaches a certain age, after which it starts to decrease. As people get older, they learn more about the different financial services available to them and begin using them. However, once they reach a particular age, possibly near retirement, they lose interest. Youth are also less likely to have a savings account or to save money in a formal financial institution than adults. Young people frequently lack access to official financial services. Legal limitations and unfavorable stereotypes about youth are a few of the causes. Income has a negative relationship with financial inclusion. People who do not have enough money are more likely to be included in the formal financial system than those who do. This is especially true because people go to financial institutions to obtain loans or credit and then open a bank account to save the income generated by the loans. Financial literacy has had a positive impact on financial inclusion. People who are literate are more likely to be included in the formal financial system than their illiterate counterparts. Financial literacy demonstrates the knowledge and skill sets required to read financial products and services. Hence, it means that those people who are financially literate can understand the advantages and disadvantages of the various financial services and ensure that the poor make the best use of their money.

BezaMucheTeka, Simon Nahusenay, and TaddessAsmare (2020) conducted a study on the determinants of financial inclusion in East Gojjam, Ethiopia, and the results show that those who are living in urban areas are 0.001 times less likely to be financially included as compared to

rural people. This may be since microfinance institutions and SACCOS are more accessible to rural people than banks are to urban residents. Financial literacy has a significant positive effect on financial inclusion. As a result, evidence suggests that their likelihood of participating in the financial system increases as their level of financial education increases. The other key factor affecting financial inclusion is awareness; people who are aware of the services offered by various financial institutions are 6.32 times more likely to use those services or become financially included. They advise that financial services should be made more accessible to individuals who are financially excluded because accessibility is the driving force behind the need for financial inclusion. The respondents' financial service usage practices improve as financial institutions become more accessible. Lower levels of income among individuals are also a major determinant factor responsible for the low level of financial inclusion, especially in developing countries. A low-income level reduces the likelihood of being financially included, while a high-income level increases the chances of being financially included.

Gashaw Desalegn1 and GebeYematawv (2017)discovered that gender, religion, living in a rural area, financial capability, preference for the formal financial sector, financial literacy, and shock all have a significant impact on reasons for not having an account. There is a significant gender discrepancy. Even after taking individual circumstances into account, econometric analysis shows that women are less likely than men to use financial services and products, such as online agents, mobile banking, and internet banking, which enhances the risk of gender bias (8.1%). Compared to individuals who are unmarried or divorced, married people have a higher likelihood (4.4%) of opening an account with a formal financial institution. Marriage may enhance a person's chance of owning an account because married people are more responsible with money. The likelihood of opening and using a formal account to save is higher (15.4%) for people with university education than for people with only primary education. When compared to no education or only primary education, secondary and tertiary education increase the likelihood of using financial products and services by 15.1 percent and 27 percent, respectively. Financial inclusion is determined by place of residence, i.e., living in a rural area reduces the likelihood of owning an account by 9.3 percent compared to living in an urban area, and regional disparities are also observed. Adults living in Addis Ababa have a greater likelihood of using financial products and services by 7.2 percent, while adults living in the Amhara region have a lower

probability by 11.3 percent. Distance is one of the barriers to financial inclusion. In rural areas, 13.2 percent of the population reported distance as a barrier.

Tekeste Berhanu Lakew and Hossein Azadi (*2020*) *did a* study on financial inclusion in Ethiopia. According to the result, the availability of suitable services could enhance organized financial access, such as through the expansion of financial institution branches offering investment products. However, Ethiopia falls short of low-income countries in sub-Saharan Africa in this regard. The main obstacles are a lack of enough resources, distance, expense, and documentation requirements. An effective strategy to deal with that problem is to make public transportation more accessible, which might increase the number of individuals who physically visit financial institutions, thus expanding the reach of formal financial institutions.Additionally, encourage people to keep a record of their income and expenses in a financial diary, which could lead to more formal personal savings. Financial education initiatives that teach individuals how to manage their money, including how to keep a financial diary, can increase the low savings rate in countries with high levels of literacy.

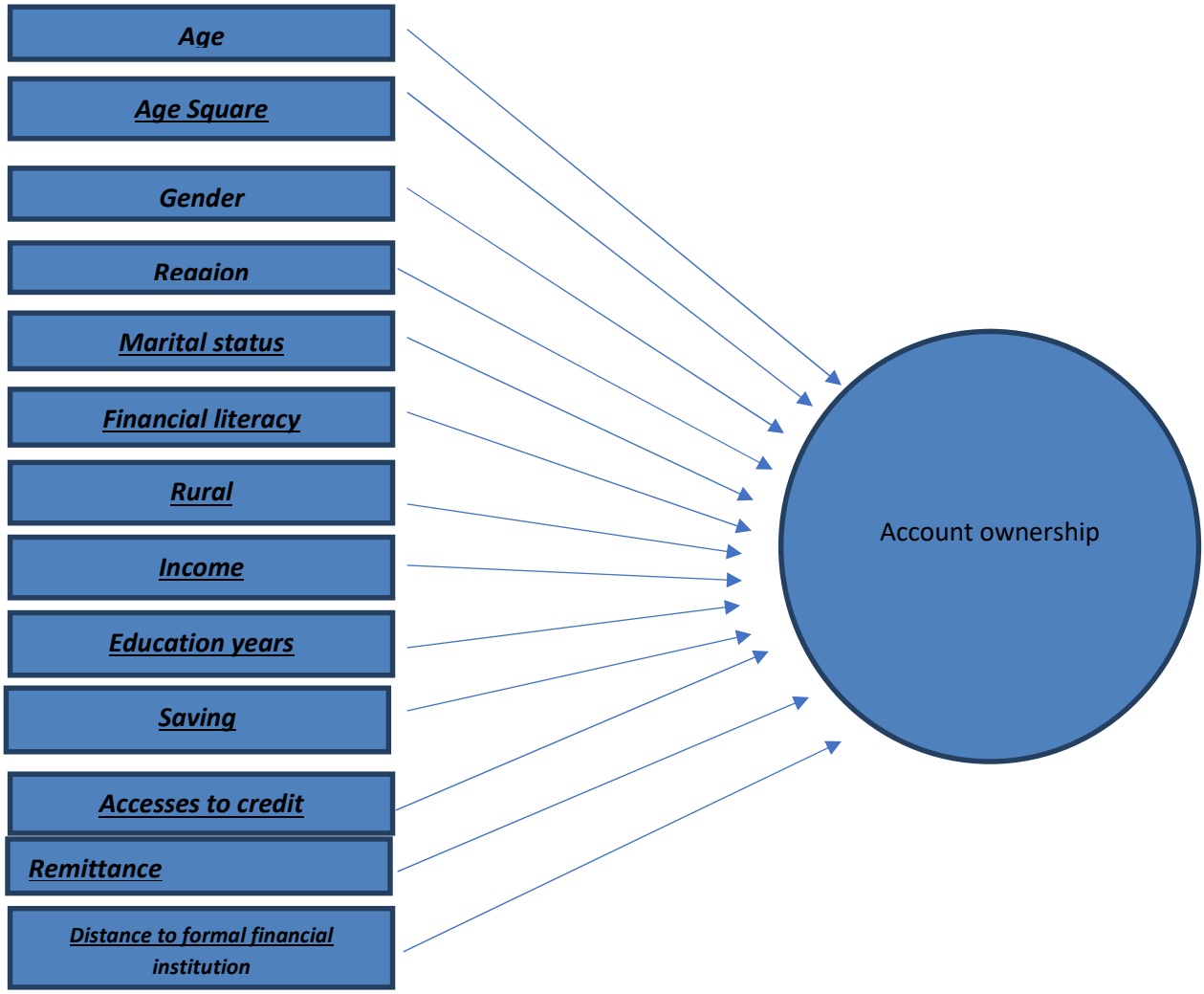
Shemelis Kebede Hundie (2021) conducted a study on the determinants of the gender gap in financial inclusion in Ethiopia. The findings indicate that women are less likely to be financially included across all parameters. Gender differences in age, education, and employment status can be used to explain why females use formal financial services and digital financial services less frequently than males. This suggests that the gender gap in financial inclusion that has been seen is a result of women having lower levels of education and employment than men. The study also discovered that rather than differences in coefficients, the gender gap in financial inclusion in Ethiopia is primarily caused by variations in the socio-economic variables that were included in the analysis. In this case, the important variables are the respondents' age, employment status, and educational attainment. Females in Ethiopia are unable to use financial services due to their lack of education, employment, age, and earnings. The research also found that age squared has a statistically significant negative correlation. This finding suggests that individuals have a higher propensity to save, own a formal account, borrow from formal financial institutions, and raise emergency funds at a younger age when they are economically active. Nevertheless, this effect reduces with age.

Mekuanint et al. (2019) did a study on financial inclusion and its determinants among households in the Jima zone of Oromia regional state, Ethiopia. The findings indicate that financial inclusion is positively correlated with age, education, financial literacy, and income, whereas financial inclusion is adversely correlated with distance to the nearest financial service provider. Financial inclusion rises in line with rising income. This finding is reasonable in the context of the Jimma Zone because most civil servants receive their pay through a bank account, and distance has a major detrimental effect on financial inclusion. The number of people who are financially included will decrease as they move further away from financial services and products. People have less access to financial items when they are far away. By regulating the financial system, fostering healthy competition, and establishing a better enabling environment, it is feasible to reduce the factors that determine financial inclusion. By identifying and dealing with the core causes, the obstacles of distance, service fees, and credit appear to be removed.

2.3 Conceptual Framework

There are many factors that influence the scope of financial inclusion. The kind and extent of financial inclusion are influenced by several factors. The conceptual framework shown below guided the entire research investigation, which was based on the theoretical and empirical literature mentioned above.

Figure 1conceptual framework



3 Chapter Three: Research Methodology

3. 1 Data Source

In this study secondary source of data was used which is LSMS (Ethiopia Socioeconomic Survey Data, 2018/19) of the World Bank. The survey is national representative.

The Ethiopian Socioeconomic Survey (ESS) is a collaborative project between the Central Statistics Agency of Ethiopia (CSA) and the World Bank. ESS is one of the multi topic household survey programs implemented in eight countries for the Living Standards Measurement Study—Integrated Surveys on Agriculture (LSMS-ISA) project. The project collects household-level panel data, giving special attention to improving agriculture statistics and generating a clearer understanding of the link between agriculture and other sectors of the economy. The project also aims to build capacity, share knowledge across countries, and improve survey methodologies and technology. The ESS Financial Inclusion Module was developed in collaboration with the National Bank of Ethiopia (NBE), CSA, and the World Bank. The module was added in the 2015/16 ESS round (ESS3) and was included with some revisions in the 2018/19 ESS round (ESS4). ESS4 also expanded the sample of households enough to generate indicators by region.

For the NFIS, the ESS Financial Inclusion Module is a valuable data source and provides a rigorous, multidimensional picture of where Ethiopia stands in expanding access to formal financial services and reaching the NFIS goals. Integration of a financial inclusion module into a multitopic household survey like ESS also makes it possible to explore how different individual, household, and community geospatial, demographic, and socioeconomic characteristics affect the financial decisions of individuals and households.

3.2 Survey design

ESS 2018/19 (ESS4) is a new panel survey.the sample is representative of both the region and rural or urban residence. Households are selected using a two-stage probability sample. In the first stage, 565 primary sampling units-CSA enumeration areas (EAs)-were selected based on probability proportional to total number of EAs in each region; of these 316 are rural and 219 are urban. In the second stage, households were selected from each EA. From each rural EA, 10 to 12 households were sampled, 10 randomly selected from a fresh list of agricultural households and 2 randomly selected from households not involved in agriculture or livestock.

In urban areas, 15 were selected from a fresh list of households in the EA. The original sample size is over 7,000 households. Due to security issues during the time the survey was carried out, it was not possible to interview all households from the original sample; thus, the total number of households interviewed was 6,770.

3.3 ESS Financial inclusion module and fieldwork

Using multiple questionnaires over multiple visits, the surveys collect a wide range of household demographic and socioeconomic variables categorized as Agriculture, Household, and Community. The Financial Inclusion Module is incorporated into the household questionnaire.

The ESS Financial Inclusion Module asks about savings, insurance, credit, banking practices, financial knowledge, and financial capability. Most of the financial knowledge and capability questions were added in ESS4; savings and insurance-related questions had been added in ESS3, 2015/16. The questions on credit were included in the first two rounds (ESS1, 2011/12 and ESS2, 2013/14). Depending on the question, the module collected information about either the individual or the household. Individuals were asked banking, savings, insurance, financial knowledge, and capability questions.

ESS data is panel data sets; however, the earlier two waves do not contain the financial inclusion module. It only contains information on credit at a household level. The survey covers 11,810 individual adults[2], which are nationally representative samples of 4,958 households. The target population is around 45 million population aged 18 and above. The survey questionnaire provides many indicators on financial inclusion that enables to assess, the amount of account penetration, the use of financial services, the barriers of formal finance, etc. It also provides micro-level information on gender, age, marital status, place of residence, education level and more others.

3.4 Method of Data Analysis

In this studyBoth descriptive and inferential statistics were used. Additionally, binary logistic regression was utilized to examine the factors that influence financial inclusion, and the survey findings were performed using STATA,

3.5Research approached

The analysis uses both descriptive and econometric methodologies. Graphs and tables are used for the descriptive analysis, and regression is calculated using a binary logit model estimation econometric analysis to find out the factors that influence financial inclusion. For the binary outcome of the dependent variables, binary logit models are common estimation techniques in statistics.

3.6 Empirical methods

The purpose of this study is to look at the variables influencing account ownership, which serves as a stand-in for financial inclusion in the research area.Since the dependent variable, account ownership, is a binary categorical variable, quantitative binary logistic regression analysis is used to achieve this objective after the data has been collected and cleaned. Rather than using a metric-dependent measure, binary logistic regression analysis is a specific form of regression that is designed to predict and explain a binary (two-group) categorical variable. Therefore, binary logistic regression is acceptable when the dependent variable is categorical (binary) and the independent variables are categorical and numeric (Hair et al., 2010). The empirical analysis uses both descriptive and econometric methodologies. Graphs and tables are used for the descriptive and legit model estimation econometric analyses.

3.7 Model Specification

The model will determine whether you own an account or not. When the household owns account, takes have account and no account if not. Therefore, to explain financial inclusion in the research area, the LOGIT regression model will be utilized, as stated below.

$$OA = \beta 0 + \beta 1(AG) + \beta 2AG2 + \beta 3GEN + \beta 4(MS) + \beta 5(FL) + \beta 6(RUL) + \beta 7(INC) + \beta 8(EDU) + \beta 9(SAV) + \beta 10(ATC) + \beta 11F(REM) + \beta 12\ (DFI) + \beta 13\ (RTS) + \beta 14(RIG) + E$$

Where, OA is the dependent variable (Owens Account), $\beta 0$ is the constant term of the model, $\beta 1 - \beta 15$ is the regression coefficients of the model, AG= Age of the individual (respondent), AG2 =age square of the respondent, GEN = gender of the respondent, MS=marital states of the respondent, FL=financial literacy of the respondent, RUL = Rural the resident of the respondent, INC= income of financial institutions, EDU=education level of the respondent, SAV=saving states of the respondent, ATC= access to credit of the respondent, REM= remittance,

DFI=distance from formal financial institution, RTS= response to shock of the respondent, and RIG= region of the respondent and E is the error term.

3.8Variables included in the Model

Among the individual level characteristics in x_j, we include several socioeconomic and demographic variables that would affect the account ownership of formal financial accounts.

1. *Owens account*: - The respondent owns (or not) an account in a formal financial institution. It takes have account if the individual owns an account, and no account otherwise. Owens account is the dependent variable which is a binary categorical variable. Owens account is a proxy of financial inclusion.
2. *Age*: - indicates the Age of the respondent in years we expect the owning of an account will increase first and then decline with age.
3. *Age Square*: - shows that age in years of the respondent squared. Expects this variable will have negative impact.
4. *Gender*: - indicates whether the respondent is female or male and it's a categorical variable. We expect the male has more chance to Owen a bank account.
5. *Region*: - explains the living place of the respondent or in which region is the respondent live. We expect individuals live in Addis Ababa have a better chance to be financially included.
6. *Marital status:* - whether the respondent is married or unmarried. Unmarried indicates whether a respondent is divorced, separated, or never been married and represented by non-married and marred.
7. *Financial literacy*: - It refers to the individual's level of awareness about the available financial products and services at the time of data collection. Financial literacy is proxy by awareness, and it takes the value aware if the respondent knows how to open an account in the formal financial sector and not aware otherwise. Awareness expects to have a positive impact.
8. *Rural:* - indicate whether the respondent live in rural area or urban area and takes rural if the respondent is a resident of rural area and takes urban if the resident is live in urban area. This variable expects to have a negative relationship.

9. *Income*: - explains the respondent financial earning and proxy by poverty, which takes poor if the respondent is poor and non-poor if the respondent is not a poor. We expect those who are non-poor respondent may have a direct relationship.
10. *Education years*: - explains the education level of the respondent: Primary education or less, Secondary education complete, till 1st degree and above 1st degree takes 1, 2, 3, and 4 respectively. Education level expects to have a positive impact on account ownership.
11. *Saving*: - shows wither the respondent has save or not. It takes yes if the individual has saving and not otherwise. Saving expects to have an encouraging impact.
12. *Accesses to credit*: - implies the respondent credit access: if the respondent has a credit access takes 1 and when the respondent has no accesses to credit takes 2. We expect this variable to have an encouraging impact on account owning.
13. *Remittance:* - explains Whether or not a respondent was financially included with specific regard to remittances. It takes 1 if the response is yes and 0 if the response is no.
14. *Distance to formal financial institution*: - explains the distance of respondent living area from the formal financial institutions. This variable proxy by distance to bank agent, distance to ATM, distance to saving and credit association, distance to commercial bank and distance to micro finances. This variable expects to be invert relationship or impact.
15. *Response to shock*: - implies that whether the respondent came up with an emergency fund or not. It takes responded if the respondent has emergency fund and no response if the respondent has not emergency fund.

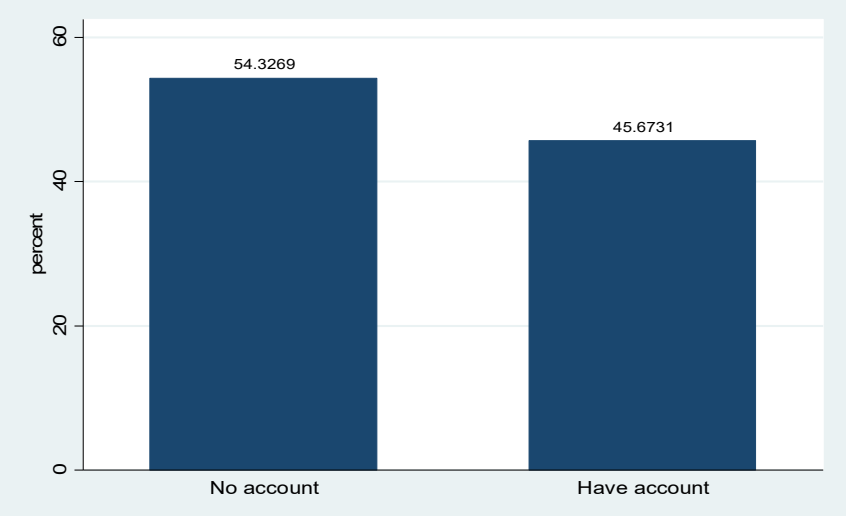
4 Chapter Four: Result and Discussion

4.1 Descriptive Analysis Result

4.1.1 Account ownership

Based on our observation, just 45.67% of people have a bank account with one of the established financial institutions, while 54.33% do not. This shows that more than half of the respondents did not have access to formal financial institutions, which also suggests that they were not allowed to use other related financial services.

Figure 2 Account holders

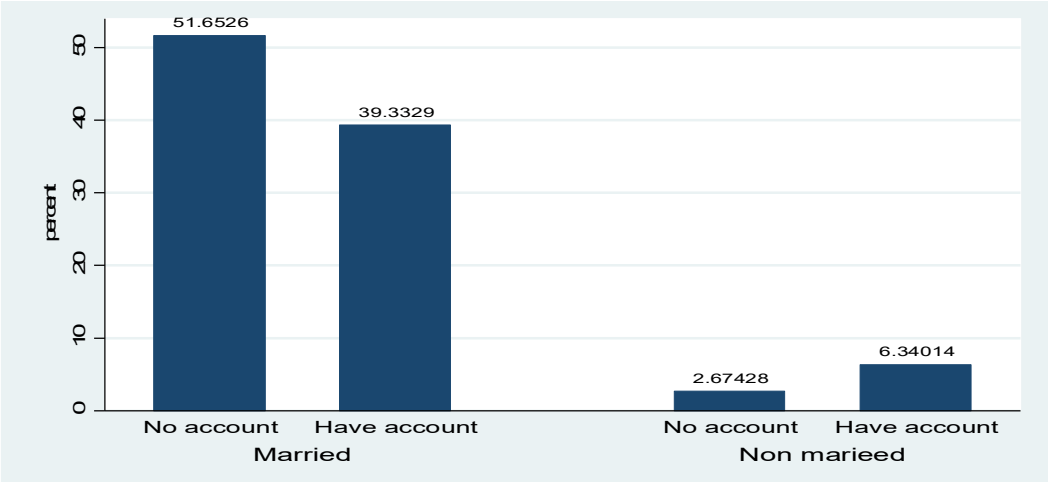


Source: Own computation from survey data 2022

4.1.2 Marital states

90.99 percent of the population observed is married; 51.65 percent of couples do not have accounts, compared to 39.33 percent of married couples who do. While 9.01 percent of people are single: 6.34 percent of people have their own accounts, compared to 2.67 percent who have none. Overall, of all married people, 56.77 percent have no accounts, and 43.23 percent have accounts. Among the single, 29.67% have no accounts, while the remaining 70.33% do. This demonstrates that married people are more likely to open a bank account than unmarried people.

Figure 3 Account ownership by marital states

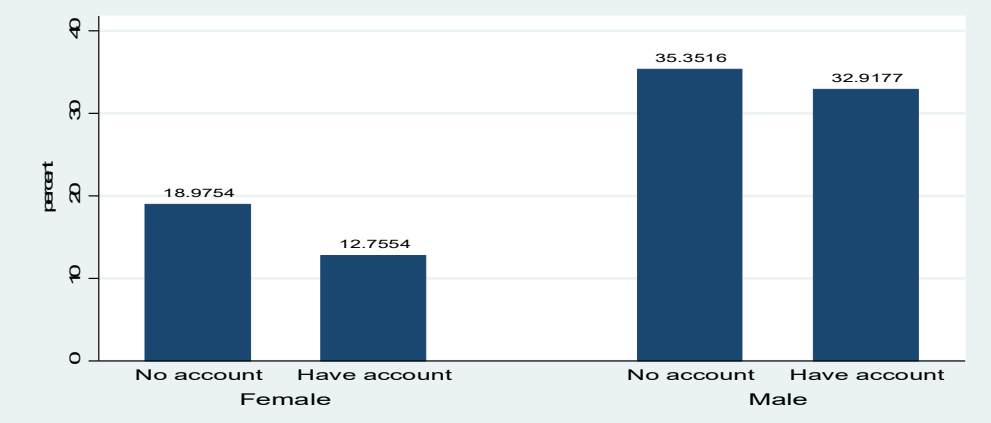


Source: Own computation from survey data 2022

4.1.3 Gender

A total of 6660 observations were made, and of those, 31.73 percent were made by women, of whom 18.97 percent have no accounts and 12.75 percent have accounts. Males make up 68.270% of the population, of which 32.92% have bank accounts and 35.35% does not. From the entire female population, 40.2% have an account, while 59.8% have none, and from the entire male population, 48.22% have an account, while 51.78% have none. This indicates that males are more likely to open an account than females.

Figure 4 Account ownership by gender

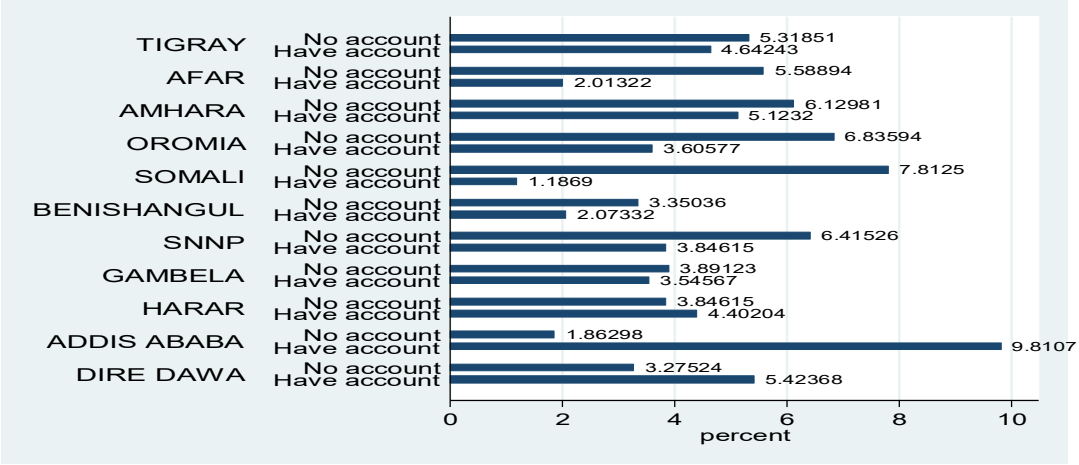


Source: Own computation from survey data 2022

4.1.4 Region

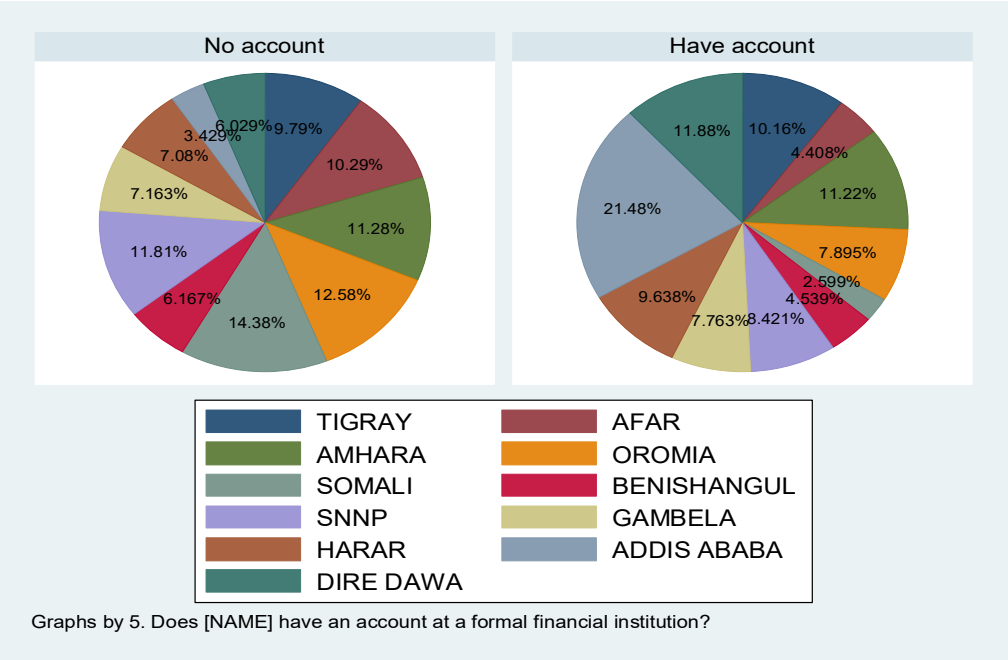
The percentage of account holders and those without an account is displayed by region in the pie chart below. The regions with the highest percentage of account owners are Addis Ababa, Dire Dawa, and Tigray, at 21.48 percent, 11.88 percent, and 10.66 percent, respectively.

Figure 5 Account ownership by region



Source: Own computation from survey data 2022

Figure 6 region by Account ownership

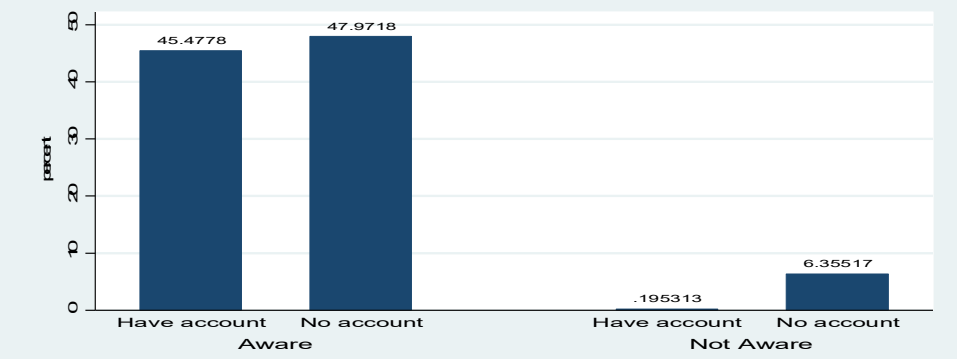


Source: Own computation from survey data 2022

4.1.5 Awareness

93.45% of those observed are aware of financial services; however, only 48.67% of them have a bank account, and the remaining 51.35% have none. While 6.551 percent of the sample does not know about the financial service, 97.02 percent of them do not have accounts, and the remaining 2.982 percent do. This demonstrates that someone with awareness is more likely than someone without awareness to open bank accounts, but the percentage of people with awareness and a bank account is not satisfactory; over half of them do not have an account.

Figure 7 Account ownership by Awareness

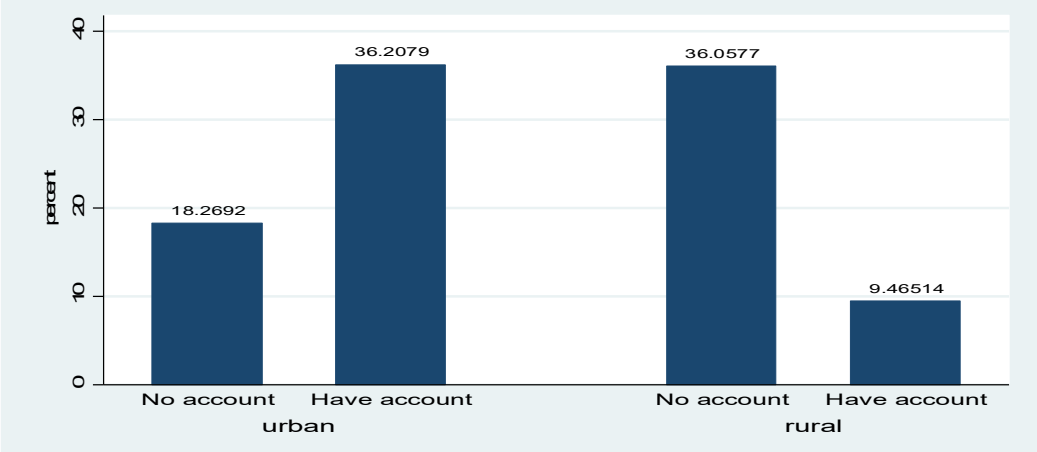


Source: Own computation from survey data 2022

4.1.6 Residence

45.53 percent of the observation is rural resident, which means 79.22 percent of them have no account and 20.79 percent have an account, while 54.478 percent of the observation is rural resident, which means 66.46 percent of them have an account and the rest, 33.54 percent, don't have an account. From the total residents, 36.20 percent live in urban areas and own accounts; 9.46 percent live in rural areas and own accounts; 18.26 percent of the residents living in urban areas don't have accounts; and 36.05 percent live in rural areas and have no accounts. This shows that a person living in an urban area is more likely to have an account than a person who lives in rural areas.

Figure 8 Account ownership by residence

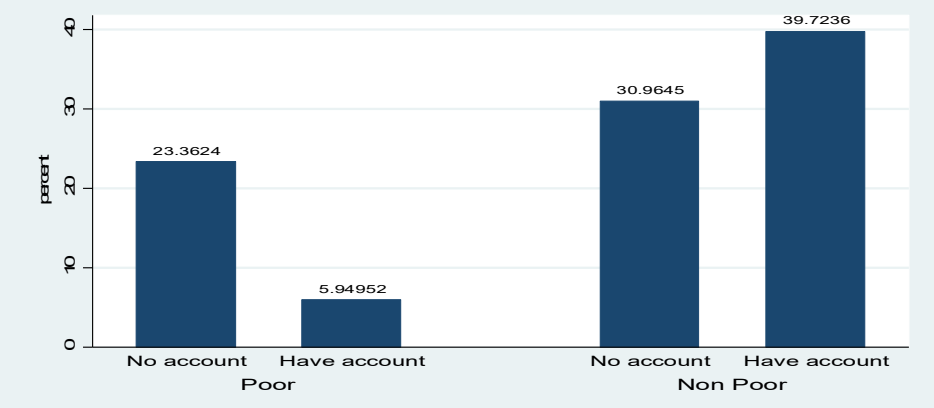


Source: Own computation from survey data 2022

4.1.7 Poverty

All observations combined show that 29.312 percent of the population is impoverished, with 20.3% of them having bank accounts and 79.7% not. The data shows that 70.689 percent of people are not in poverty. and 56.2 percent have bank accounts compared to 43.8 percent who don't have. In total, 23.3624 percent of the population is poor and does not have a bank account; 5.94952 percent of the population is poor and does have a bank account; 30.9645 percent of the population is non-poor and does not have a bank account; and 39.7236 percent of the population is non-poor and does have a bank account.According to this, someone who is not poor is more likely to have a bank account than someone who is poor. However, a sizable portion of the non-poor population lacks a bank account.

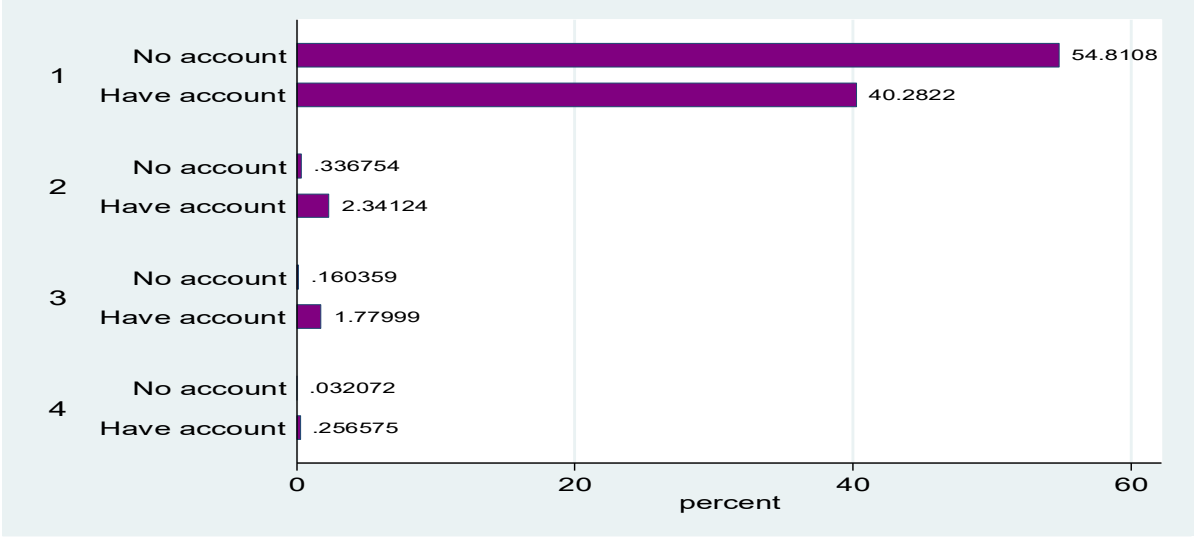
Figure 9 Account ownership by poverty level



Source: Own computation from survey data 2022

4.1.8 Education

Figure 10 Education level by Account ownership



Source: Own computation from survey data 2022

Where 1= elementary and bellow

2= secondary complete

3= till 1st degree

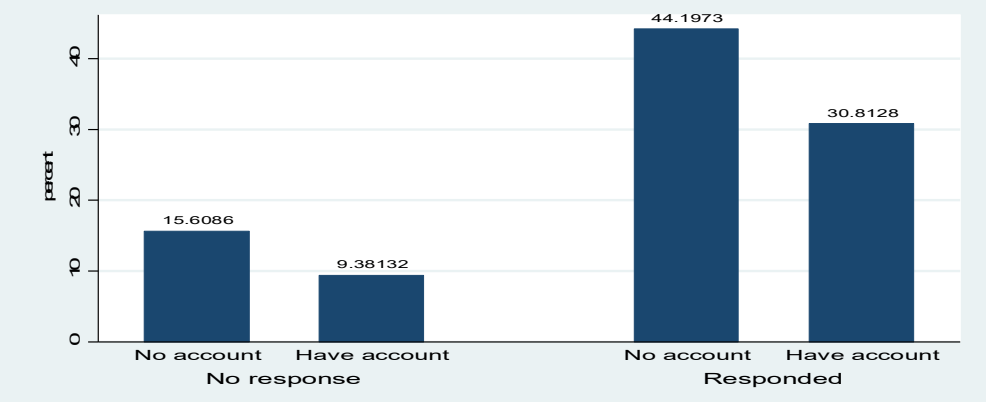
4= above 1st degree

95.093 percent of the observations are elementary completion, and below that, 57.64 percent of them have no account and 42.36 percent have a formal bank account. 2.678% of the populations are secondary complete, of which 87.43% have accounts and 12.57% do not. 1.941 percent is up to the first degree, with 91.74 percent having bank accounts and 8.26 percent having none. The remaining 0.289 percent are above the first degree, with 88.89 percent having an account and 11.11 percent not. Totally 40.2822 percent is a population who is elementary completed or bellow and having account, 54.8108 percent are elementary completed or bellow and not having account, 2.34124 percent are those secondary complete and have a bank account, 0.336753 percent are those secondary completed and don't have a bank account, 1.7799 are those up to first degree and have an account,0.160359 percent is up to the first degree and no account, 0.256575 percent is those above 1st degree and have an account and 0.032072 percent is above 1stdegree with no have an account. This shows that someone who is literate is more likely to create a bank account than someone who is illiterate or only has a basic education.

4.1.9 Response to shock

Across the board, 75.011 percent of those seen are responding with shock. 41% of them have bank accounts, and 58.92 percent don't. In response to the shock, 24.99 percent did not react, with 62.46 percent not having an account and 37.54 percent having an account. A total of 15.6086% of the samples do not respond to shock and do not have a bank account, 9.38132% do not respond to shock and do have a bank account, 44.1973% do not respond to shock but they do have a bank account, and 30.8128% do respond to shock and do have a bank account.We can observe that the one who responds to shock is most likely to own a bank account than the one who didn't respond to shock. But we can also see that large portions of the respondents have no account, which means they are mitigating the shock in an informal way.

Figure 11 Account ownership by Response to shock



Source: Own computation from survey data 2022

4.1.10 Saving

40.25 percent of the population has saved, 85.33 percent of them have bank accounts, and the rest, 14.67 percent, are without bank accounts. 59.75 percent of the population didn't save, and 18.96 percent of them had a bank account, while 81.04 percent didn't have an account. 48.4225 percent of respondents did not reply and did not have a bank account, 11.3281 percent did not respond to shock but did have a bank account; 5.90443 percent did respond to shock but did not have a bank account, and 34.345 percent did respond to shock and did have a bank account. The likelihood of having a bank account is highest among those who have saved. However, a lot of people have accounts but haven't stored anything. This could be brought on by unemployment and low or insufficient income.

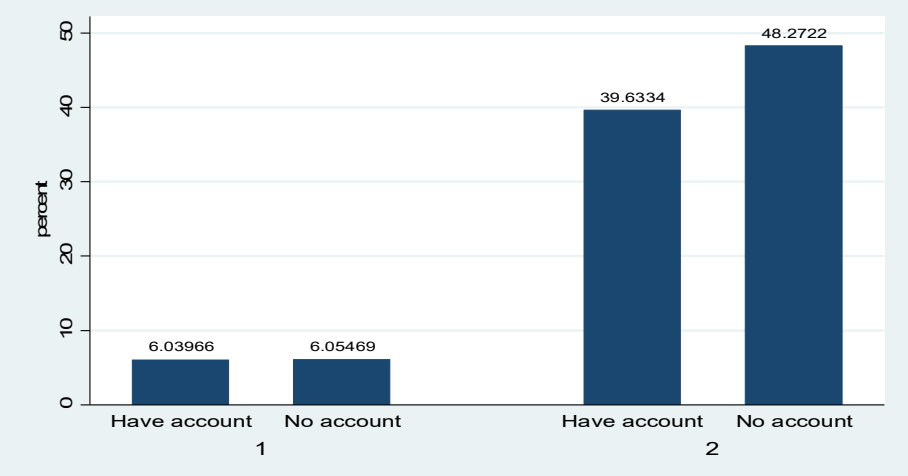
Figure 12 Account ownership by saving

Source: Own computation from survey data 2022

4.1.11Credit Access

According to the observation, 12.095 percent of the population has access to credit, of which 49.94 percent have accounts and 50.06 percent do not. 87.906 percent of people lacked access to credit, while only 45.09 percent of them had accounts and 54.91 percent did not. Overall, just 6.03966 percent of people have access to credit and a bank account; 6.05469 percent do not have a bank account but do have access to credit, which indicates that their source of credit is informal or cultural; 39.6334 percent do not have access to credit but do have access to a bank account; and 48.2722 percent do not have access to either. This data shows that a significant section of the sample is denied access to credit even though they have a bank account or that only a very small portion of the population has access to credit. In addition, there is an equal chance that both the legal and unofficial financial sectors may offer credit to an individual.

Figure 13 Account ownership by Credit access

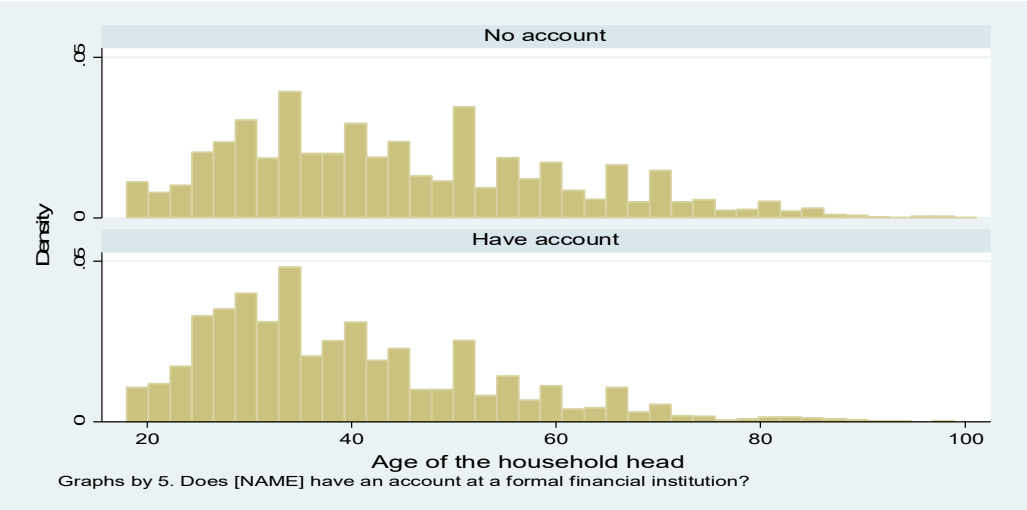


Source: Own computation from survey data 2022

4.1.12 Age

Graph Fig 4.12 demonstrates that the likelihood of possessing an account is low in the beginning and starts to rise for adult age groups and to decline for older age groups. Many people start saving at an early age and then use it later in life.

Figure 14 Account ownership by age

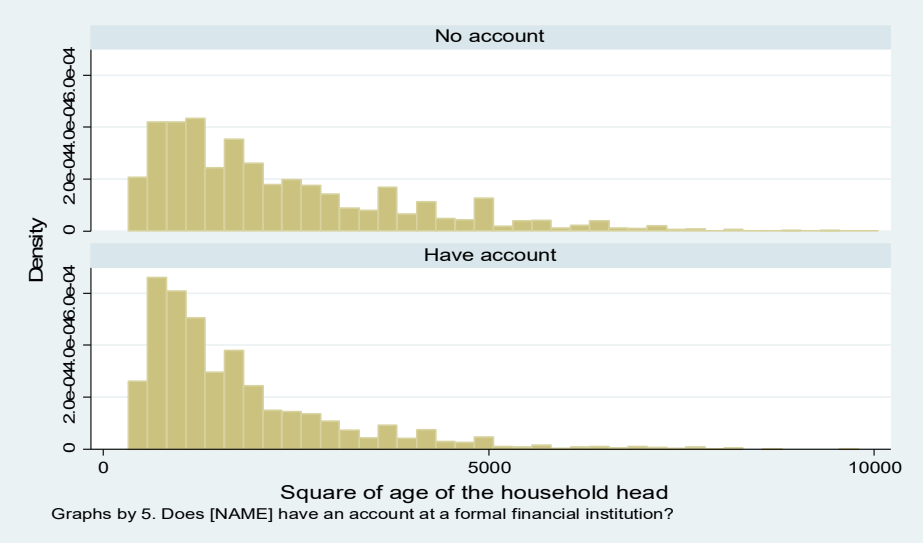


Source: Own computation from survey data 2022

4.1.13 Age Square

People typically save in adulthood, then decelerate their savings and use their previous savings in retirement.

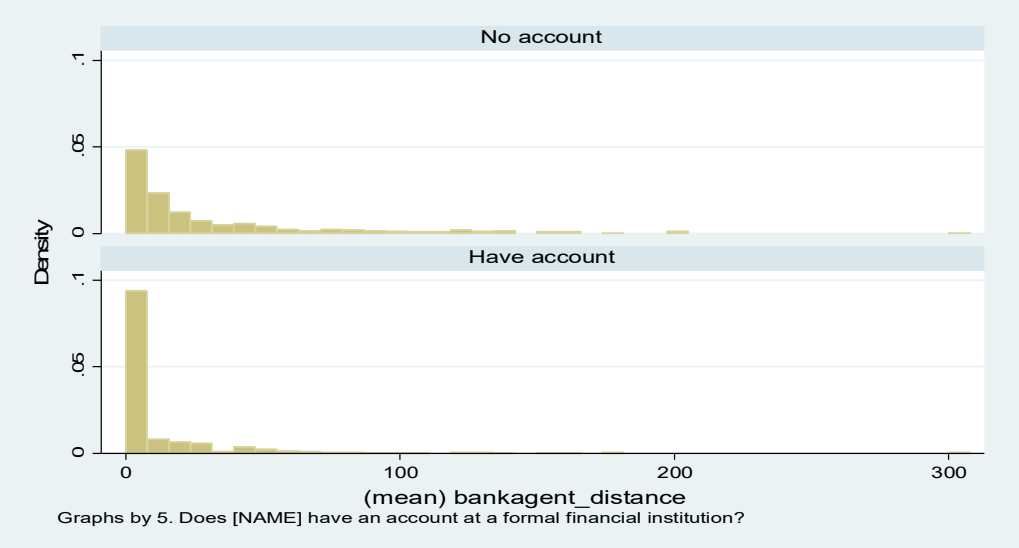
Figure 15 Account ownership by Age square



Source: Own computation from survey data 2022

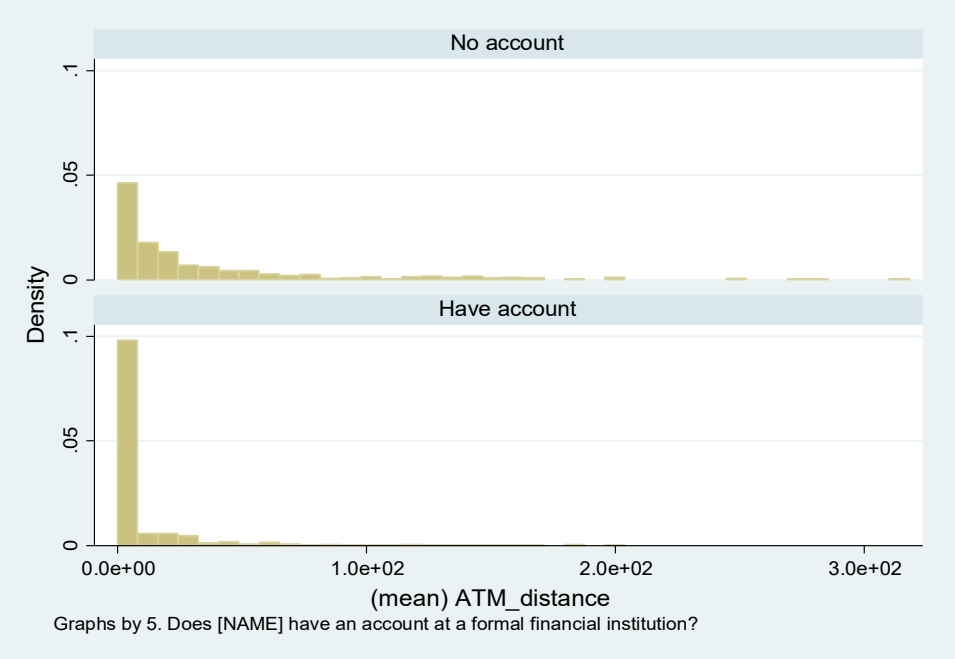
4.1.14 Distance

Figure 16 Account ownership by distance to bank agent



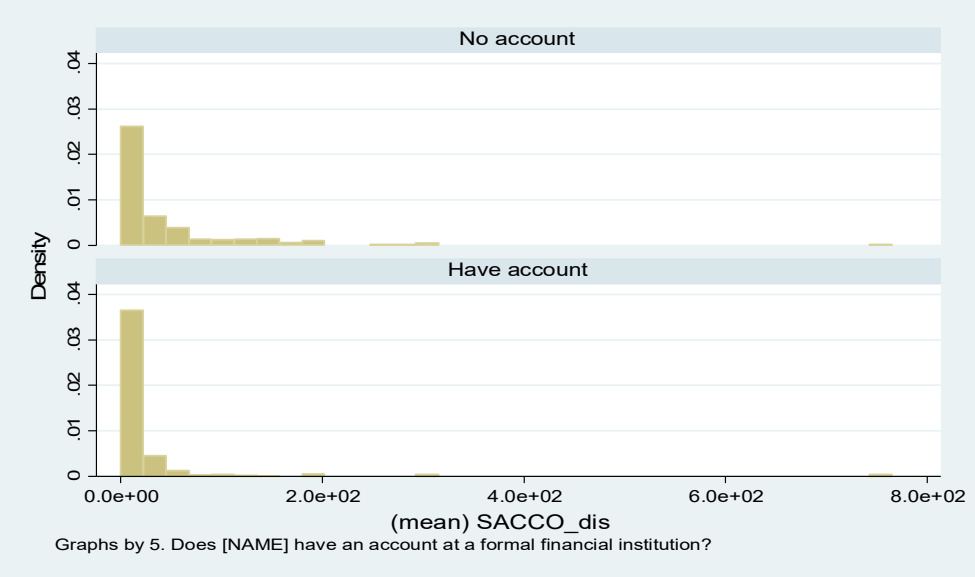
Source: Own computation from survey data 2022

Figure 17 Account ownership by distance to ATM



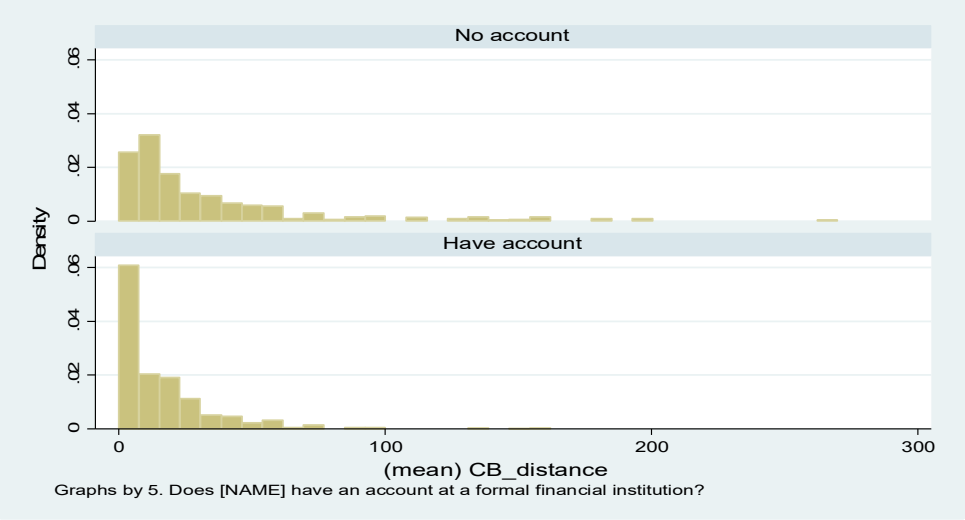
Source: Own computation from survey data 2022

Figure 18 Account ownership by distance to SACCO



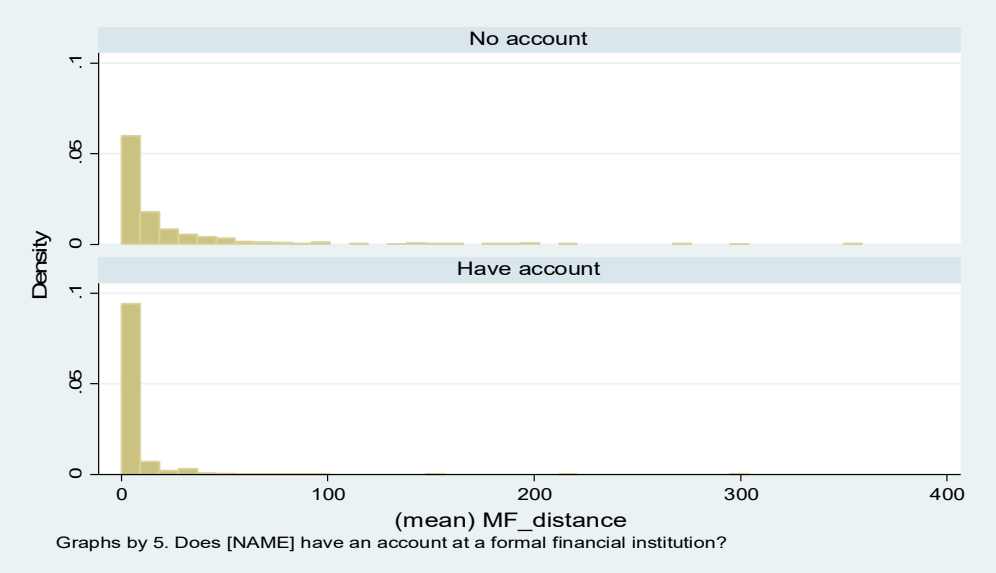
Source: Own computation from survey data 2022

Figure 19 Account ownership by distance to CB



Source: Own computation from survey data 2022

Figure 20 Account ownership by distance to MF



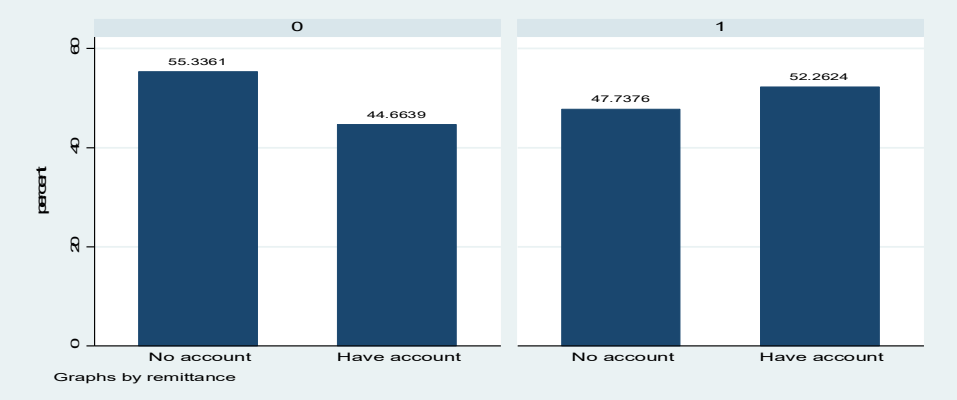
Source: Own computation from survey data 2022

The five graphs described above show how having a bank account is more likely when you live close to a formal financial institution. Each of these shows that the likelihood of having a bank account decreases as the distance to a formal financial institution rises (distance to a commercial bank, distance to microfinance, distance to an ATM, distance to a bank agent, and distance to a savings and credit association).

4.1.15 Remittance

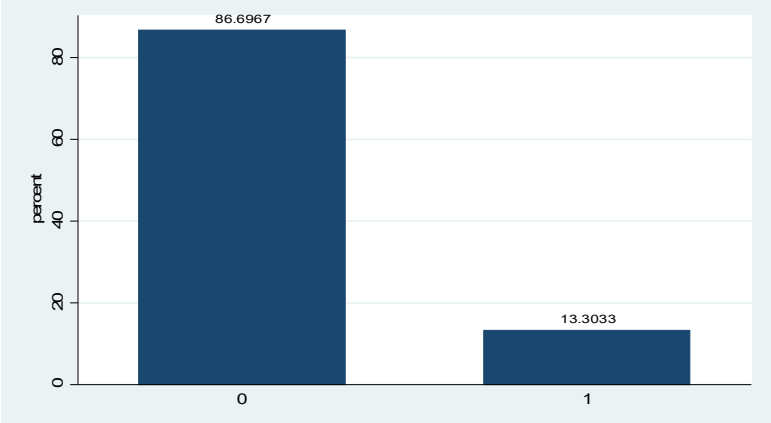
86.7 percent of the sample population has made remittances; of those, 52.28 percent have a formal bank account, while 47.72 percent do not. 13.3 percent of the sample didn't make remittances; of them, 44.66% have a formal bank account, and 55.33% don’t have a bank account.

Figure 21 Account ownership by remittance



Source: Own computation from survey data 2022

Figure 22 Account ownership by remittance



Source: Own computation from survey data 2022

4.2 Econometric Analysis Result

Table 1 Binary Logistic Regression Estimation Result

Variables	Sig	S. E	Coefficient	Z
Age	0.058	0.0418724	0.0793583	1.90
Age square	0.058	0.0004234	-0.0008025	-1.90
Gender				
Male	0.004	0.2832934	0.8174242	2.89
Region				
Afar	0.604	0.7774065	0.4027439	0.52
Amhara	0.052	0.7925616	1.539731	1.94
Oromia	0.852	0.7205894	0.133989	0.19
Somali	0.241	0.8589951	-1.007709	-1.17
Benishangul	0.943	0.7879256	0.056823	0.07
SNNP	0.977	0.7316508	-0.0210209	-0.03
Gambella	0.037	0.8203385	1.715427	2.09
Harar	0.051	0.7480613	1.45873	1.95
Dire Dawa	0.831	0.8295137	0.1772419	0.21
Resident				
Rural	0.000	0.3343631	-1.403028	-4.20
Education years				
Education level (2)	0.984	1.56594	-0.0323464	-0.02
Education level (3)	0.184	1.953715	2.596466	1.33
Education level (4)				
Marital states				
Non married	0.013	0.5095525	1.260258	2.47
Awareness				
Aware	0.018	1.083323	2.554254	2.36
Response to shock				
Responded	0.293	0.2921959	0.3070904	1.05
Saving				
Yes	0.000	0.2464834	2.922013	11.85
Remittance	0.361	0.3693029	0.3376733	0.91
Credit access	0.307	0.2855021	-0.2918806	-1.02
Poverty level				
Non-Poor	0.022	0.2558198	0.5871001	2.29

distance to Bank agent	0.009	0.0055994	-0.0145439	-2.60
Distance to ATM	0.978	0.0068912	-0.0001871	-0.03
Distance to Saving and Credit association	0.615	0.0078977	-0.0039688	-0.50
Distance to CBE	0.686	0.0107377	-0.0043385	-0.40
Distance to Micro finance	0.982	0.0108732	-0.0002411	-0.02
Constant	0.000	1.692511	-6.345889	-3.75

Source: Own computation from survey data 2022

The above table shows the significance or non-significance of each independent variable and its coefficient. Based on the economic analysis Age, age squire, gender, residence, married status, awareness, saving, poverty, bank agent distance, Amhara, Gambella, and Harer are significant variables in the impact of the dependent variable, bank account ownership. Age, gender, married status, awareness, savings, poverty, Amhara, Gambella, and Harerare are all positive factors that influence the dependent variable, whereas age squared, residency, and bank agent distance are all negative.

Owns account = -6.34588+2.922(saving) + 2.55(awareness) + 1.71(Gambela) + 1.539(Amhara) +1.4587 (Harer) + 1.26(Non married) + 0.817(male) + 0.5876(non- poor) + 0.079(age) - 1.4(rural) - 0.014(bank agent distance) - 0.0008(age square)

When all variable is held fixed at zero, the log odds of having a bank account are -6.6138. This means that if a person does not satisfy one of the criteria mentioned, they cannot have a bank account. Along with the following, there are ten variables that significantly affect account ownership:saving: -Saving has a positive and significant relationship with account ownership by P value of 0.00. when a person starts savings the log odds of having a bank account is raised by 2.922 kipping other variables constant. The study conducted by BezaMuche, Simon Nahusenay and TaddessAsmare (2020) &Baza and Reo (2017) also found that there is a positive relationshipbetween saving and financial inclusion. Awareness: -The result related to the impact of awareness on the respondent's status towards financial inclusion revealed that it had positive impact by P value of 0.018 significance on whether a respondent own bank account or not. Better financial awareness will boost the log odds of opening an account by 2.55. This specific result implied that those who were financially aware about the services provided by different financial

institutions had a greater likelihood of owning account than those who are financially unaware. Tuesta et al. (2015) also proves that the level of awareness is an important variable that determine financial inclusion. Further, Kumar and Mishra (2015) Investigated that lack of awareness is one of the major determinants of financial inclusion that need to be looked into with much more prudence and emphasis.BezaMucheTeka (2020) also concluded that the awareness will increase the chance to be financially included.Region:- from the variable Region being from Gambella region, Amhara region and Harar region are favorably affect the dependent variable account ownership by p value of 0.037, 0.052 and 0.051 level of significances respectively, being from Gambella region will increase the log odds of having a bank account by 1.715, being from Amhara region will rise the log odds of account ownership by 1.539 and live in Harer region will rise the log odds of owning an account by 1.45 than the people who are live in other regions.Marital status: At 0.013 P level of significance, being single positively influences account ownership, with the log odds of 1.260 having a bank account. When households are Unmarried the higher tend to be open bank account. But study by Gashaw and Gebe find that a marred is more chance of financially included than the non-marred. Gender: - Bing a male is affected account ownership positively by P value of 0.004 significance with a 0.817 coefficient. Bing a Male increase in the log-odds of the dependent variable owning a bank account by 0.817 or being a male will increase the chance of having account at the formal financial institution than female. a study by Gashaw and Gebe also conclude that a female is less probability of financially included than the male.poverty: - non poor has a positive impact on the dependent variable with its significance at 0.022 value of p and coefficient 0.587. when a person become non-poor the log odds of owning an account 0.485 times more than those who are poor. The same conclusion also made by a study conducted by BezaMuche, Simon Nahusenay and TaddessAsmare (2020), Esme; Abdu & Mohamed Adem(2021) and Lakew& azadi(2020). Age: - an age is a variable that impact account ownership positively with a 0.058 p value of significant and 0.0793 coefficient. This shows that a single increment of an age will lead to an increase on the log odds of owning a bank account by 0.0793. Resident: - As presented above, the result related to residence indicated that living in rural area has a negative impact on account ownership and significant by p value of 0.00 with -1.4 coefficient which implies that A household who is live in a rural area has a less log odd of having a bank account by 1.4 than those household live in urban area. This may be because the less accessibility of financial institution for rural resident compared to the Urbana

residents. In contrast to this finding, a study conducted by BezaMuche, Simon Nahusenay and TaddessAsmare (2020) investigate that live in urban area had negative significant impact on financial inclusion.Distance to bank agent: - the variable distance to the bank agent has a negative impact on the dependent variable, account ownership, by a 0.009 p value of significance with a -0.014 coefficient. A single increase in the distance to the bank agent from the mean distance will decrease the log odds of account ownership by 0.014. A household that is living near a bank agent has a higher probability of having a bank account than one that is living far from bank agents. When a household becomes closer to a bank agent, the probability of owning an account tends to increase. Research by BezaMuche, Simon Nahusenay and TaddessAsmare (2020), Tuesta et el (2015) and Lakew& Azadi (2020) also conclude that the distance of financial institution is inversely related with financial institution.Age square: - Age squared affects account ownership negatively at a 0.058 p value of significance with a -0.0008 coefficient. A single increment on age squared tends to decrease the log odds of account ownership by 0. 0008.Tuesta et el (2015) and Lakew& Azadi (2020) also find the same results which is the probability of binge financially included or using financial products will increase when a person becomes elder.

4.3 Conclusion and Recommendation

The general objective of this study is to determine the causes of Ethiopia's low level of financial inclusion. Specific goals include determining the level of financial inclusion generally and with respect to a few key characteristics, examining the relationships between various socioeconomic and demographic factors and financial inclusion in Ethiopia. Based on the descriptive study, we can see that there is a significant gap practically across all social and demographic account ownership indicators. Based on the binary logistic regression results we can conclude that the independent variables Age, age squire, gender, residence, married status, awareness, saving, poverty, bank agent distance, Amhara Region, Gambella Region, and Harer Region are significantly affect the account ownership or the financial inclusion and the rest independent variables Response to shock, Remittance, Accesses to credit and Education years are non significant factor. Among the significant variables Saving, awareness, Gambelarigion, Amhara rigion ,Harer region and Married are the major Variables that affect positively with a coefficient value of more than one and the variable rural also a major variable which affect negatively with

a coefficient value of more than -1. Finally, to highlight recommendations from this study, Government and financial institutions must collaborate to end financial exclusion and make the financial sector more inclusive by placing the following priorities.

- encourage the society to save in the formal financial sector or inspire the usage of official financial institutions for both saving and credit through promoting general and financial education and using various media.
- resolving discrepancies between residents of rural and urban areas and closing the gap between the regions caused by the accessibility of the financial sector or geographical variations.
- root causes must be addressed to remove obstacles to reducing the gender gap. Giving a Female-focused financial education programs will help women gain a basic grasp of having a formal account and how to use financial products and services.
- The use of formal accounts might increase with the removal of financial, administrative, and physical constraints Additionally, try to include the underprivileged section of society by using alternative incentives, such as providing credit with little or no collateral and awarding prizes to those who repay the credit.
- Creating products and services that are suitable for vulnerable societal groups like the young, women, elderly, and poor.
- addressing geographical differences and the inequality between people of urban and rural areas. promoting and broadening alternative financial services and goods in rural Ethiopia, such as agent banking and mobile banking.

- increase the accessibility of formal financial institutions or decrease the distance to formal financial institutions by increasing a branch of banks, bank agents, microfinance's and saving and credit associations.

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