



Addis Ababa University  
College of Business and Economics  
Department of Management

# **Factors influencing penetration of microinsurance in Ethiopia**

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**Addis Ababa**

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**Approved By Board of Examiners**

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## **Declaration**

I, the undersigned declare that this research paper is my original work. Moreover, all sources of materials used for this research paper had been properly acknowledged.

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## **Certification**

This research paper has been presented for examination with my approval as the appointed adviser.

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Dr. Yitbarek Takele

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## List of Acronyms and Abbreviations

<b>AIG:</b>	American International Group inc
<b>ANOVA:</b>	Analysis of Variance
<b>CEO:</b>	Chief Executive Officer
<b>EU:</b>	Expected Utility
<b>GDP:</b>	Gross Domestic Product
<b>GPI:</b>	Gross Premium Income
<b>GTP:</b>	Growth and Transformation plan
<b>IAIS:</b>	International Association of Insurance Supervisors
<b>LSIB:</b>	Licensing and Supervision of Insurance Business
<b>MA/MSc.:</b>	Master of Art or Master of Science
<b>NBE:</b>	National Bank of Ethiopia
<b>SPSS:</b>	Statistical package for social sciences
<b>UNDP:</b>	United Nations Development Programme
<b>USD:</b>	United State Dollar
<b>VIF:</b>	Variance inflation factor
<b>WFP:</b>	World Food Programme

## Abstracts

*The purpose of this study is to identify the factors influencing penetration of micro-insurance in Ethiopian insurance companies. The study adopts a cross-sectional quantitative technique with descriptive and analytical design based on primary data sampled using non probability sampling from 110 executive managements of five insurance companies providing microinsurance and nine years data from the same companies. Five (5) key factors affecting microinsurance penetration in Ethiopia are identified. The Multiple Linear regression model was used for analysing regression results and all relevant diagnostic tests were conducted to validate results. Empirical investigation using the Multiple Linear regression model indicates client awareness, income Level and trust having positive and significant impact on microinsurance penetration rate. Whereas product Price of microinsurance have negative and significant impact on microinsurance penetration rate. The study therefore recommends, amongst other things, intensive awareness creation campaign by all stakeholders about microinsurance product and its benefit among low income people, setting price that does not compromise the ability of clients to pay for essential items such as food and shelter, build trust and provide incentive like tax exemption on microinsurance transaction for provider and put coercive low for non provider to participate in providing microinsurance products taking in to consideration the double advantages that it has in protecting the poor from unexpected loss and alleviating poverty. In addition the government must integrate micro insurance program into its grand strategy in poverty reduction and Growth and transformation plan in striving to become middle income country by 2025.*

**Key words:** *Microinsurance, Penetration, Premium*

## **CHAPTER 1: Introduction**

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This research paper examines factors influencing penetration of microinsurance in Ethiopia (Clients awareness, level of income, price, government regulation and trust).

This chapter outlines specifically background information of the research paper and highlights development of insurance and microinsurance in Ethiopia. The research paper is organized in eight sections. The first section deals with background information & insurance industry in Ethiopia and followed by problem statements, research questions, objectives of the study, significance of the study ,scope of the study ,limitations of the study and finally organization of the research paper respectively.

### **1.1 Background of the Study**

According to Roth, McCord & Liber (2007) low income society live in risky environments vulnerable to numerous perils, like accidental death, disability, illness, loss of property due to fire or theft, agricultural loss and both the natural and man-made disaster. The poor are more vulnerable to many of these risks than the rest of the population and they are the least able to cope when crisis does occur. Because their resources are so limited, poor people can experience great financial disruption when unexpected events befall them. If a breadwinner is injured or falls ill, there is not only loss of labor & income, but the prospect that without cash in advance there will be no treatment at all. If a breadwinner dies, not only must funeral expenses paid, but continued cash for basic needs and education of the family is required. A poor person's property may be limited to a few crops or animals and a modest shelter, but the destruction of these may be a great blow to the family's economy. In the absence of formal insurance markets the poor typically cope with economic crisis by tapping in to their savings, falling in to debt, or selling assets often with disastrous results. Swiss Re places the microinsurance market segment, in terms of gross domestic product (GDP) per capita, at the approximate range of \$1.25 to \$4 per day. In a 2010 Lloyd's study, people in this segment identified the following risks as their main concerns: Illness, Death, Natural disaster, Livestock disease, Accident, Property Loss.

According to Churchill, 2006 there are two main varieties of micro-insurance- one focused on extending social protection to the poor in the absence of appropriate government schemes and

the other is offering a vital financial services to low income households by developing an appropriate business model that enables the poor to be a profitable (or sustainable) market segment for commercial or cooperative insurers.

American International Group inc. (AIG) was one of the first companies to offer micro-insurance and began selling policies in Uganda in 1997. It was soon joined by other large insurers including Swiss Re, Munich Re, Allianz and Zurich financial services (Microinsurance and emerging market, 2017).

Initially the low income people had generally been excluded by mainstream commercial insurance schemes. This day there is an increasing emphasis on micro insurance as a means to protect the poor from unexpected shocks. Micro-insurance is the type of insurance designed to serve the poor who is excluded from the main stream of insurance (Dror & Piesse, 2014). There are a variety of different definitions of micro-insurance and there is no standard accepted definition of micro-insurance. Churchill (2006) defines micro-insurance as the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. A peril in this context refers to the type of event (such as property damage, health problems and death) that could have a financial impact on a person. Under this commonly used definition, microinsurance is simply insurance for low-income people. Low-income people can use microinsurance, where it is available, as one of several tools (specifically designed for this market in terms of premiums, terms, coverage, and delivery) to manage their risks (UNDP, 2006). The role of microinsurance as a risk coping mechanism is to assist the management of risk by transferring risk to a private organization (UNDP, 2013).

Micro-insurance is like any other insurance in that it provides a cover against loss; where it differs is that micro-insurance is targeted to a specific market: low income population.

Products and programs are designed for a particular segment of the demographic pyramid (Lowest income, middle to lower income, and highest income). According to A.M.Best company, Inc. (2012) report, the population with an approximate income level falling in the lowest income range receives humanitarian assistance and tends to be out of reach for commercially viable microinsurance programs. Those in the highest income range typically have access to traditional insurance. To low income populations; insurance's Purposes include access to health services and sustaining families or villages in event of a natural disaster.

Research suggests that microinsurance is important for a number of reasons. Microinsurance aids the promotion of financial inclusion and social protection of vulnerable populations, whilst presenting significant business opportunities for the private sector. For governments, a well-regulated microinsurance sector can help to complement existing social protection programs whilst supporting continued economic development (Tomchinsky, 2008). This study will borrow from the Expected utility theory, under expected utility (EU) theory, insurance demand is a choice between an uncertain loss that occurs with a probability when uninsured and a certain loss like paying a premium (Manning and Marquis 1996). EU theory assumes that people are risk averse and make choices between taking a risk that has different implications on wealth.

## **1.2 Insurance industry in Ethiopia**

According to Zeleke (2007) the evolution of insurance service starts when the modern form of banking service in Ethiopia was introduced in 1905. At the time, an agreement was reached between Emperor Menelik II and a representative of the British owned National Bank of Egypt to open a new bank in Ethiopia. Similarly, modern insurance service, which were introduced in Ethiopia by foreigners, mark out their origin at 1905 when the bank of Abyssinia began to transact fire and marine insurance as an agent of a foreign insurance company. Jointly owned by the Emperor, his retinue and foreign companies, the first domestic insurance company, namely, Imperial Insurance Company started issuing policies in fire, life and general accident since 1951. But it was not that big in comparison to foreign insurance entrepreneurship in the country.

In Ethiopia pre 1974, the financial system operated in a free market economic environment. However, in 1980s, the financial system was restructured and reorganized to serve centrally planned economic system which was created following the change of government in 1974. During post 1974, the Government nationalized all financial institutions in the country and created three specialized banks (excluding the central bank) and one insurance company. Private ownership of financial institutions was prohibited. The three states owned banks and the insurance company were administered by the central bank called the National Bank of Ethiopia (NBE). The only insurance firm, the Ethiopia Insurance Corporation, was responsible for provision of all types of insurance services.

In 1990s, following the shift from socialist to market economic system, Ethiopia reformed financial services industry. The change measures included complete reform of government owned financial institutions and opening the sector for local private equity participation. The three government owned banks and one insurance company inherited from socialist regime were made autonomous in terms of managing their business and recapitalized. While there was no change in the role of Commercial Bank of Ethiopia (as short term financier), Development Bank of Ethiopia (as provider of medium and long term development finance), Construction & Business Bank has been allowed to engage in short-term financing activities and Ethiopian Insurance Corporation (as provider of both general and life insurance services). Opening of the financial services industry for local private equity participation resulted in establishment of sixteen (16) private banks, sixteen (16) private insurance companies and Thirty five(35) microfinance institutions as of today(NBE, website).

The Licensing and Supervision of Insurance Business Proclamation No. 86 of 1994 governs all insurance activities in Ethiopia and is supported by definitions contained in the Commercial Code of 1960.

Before the 1975 change and during the Derge regime, the activity of insurance was governed only by the Commercial Code of 1960. However, the new phase called for new insurance regulation and the Licensing and Supervision of Insurance Business Proclamation No. 86 was promulgated in 1994. The LSIB Proclamation together with the Monetary and Banking proclamation (No. 83 of 1994) authorize the Bank of Ethiopia as the regulator, supervisor and policy-maker of the insurance industry in Ethiopia (Smith & Chamberlain, 2010). It is essential to note that while the LSIB Proclamation defines the functions of the Bank with respect to insurance, it is actually the Monetary and Banking Proclamation No. 83 of 1994 that establishes the Bank of Ethiopia as an entity independent from government and with the power to supervise the banking and insurance sectors. On top of defining the functions of the insurance supervisor, the Insurance Proclamation also provides the Bank with the power to issue directives relating to various areas of insurance business. The Bank has an Insurance Supervision Department that is responsible for the above. This implies that the insurance supervisor is not independent from the Central Bank as required by the International Association of Insurance Supervisors (IAIS).

Ethiopia, the second most populous country in Africa with an estimated population of around 100 million plus, based on the latest United Nations estimates, is a predominantly agricultural country and categorized as poor country. More than 80% of the population lives in rural areas and Agriculture accounts for more than half of its economy, and employs 80% of its population. According to the borgen project (2013) an estimated population, 78% of Ethiopians struggle with an income below US\$2 a day and is deprived of basic social services like health, Medicare, etc. In Ethiopia, microinsurance pilot programme was initiated by the World Food Programme (WFP) in 2006 in which the entire country was insured against drought. The premium was covered by the WFP and was insured by the AXA Re (Barrett et al., 2009). In Ethiopia, even though microinsurance is at its infant stage and the limited penetration of microinsurance is evident, the development of microinsurance in recent year is progressive. Currently five (5) insurance companies are providing microinsurance products in the country. Microinsurance products currently available on the market are agricultural and credit life microinsurance products. Microinsurance penetration rate in Ethiopia sits at **0.001%** in 2016, which is measured as (gross insurance premiums volume over GDP). Araya (2011) describes that Nyala insurance company S.C is the pioneer in designing whether related risk for small holder farmers in 2007. Landscape of Microinsurance (2015) estimates a total of 1.83 million Ethiopians were identified as being covered by microinsurance as of the end of 2014 with microinsurance coverage ratios of 1.9 %. Out of the seventeen (17) insurance companies in the country only five (5) of them are engaged in providing microinsurance products. Despite the gradual development of microinsurance coverage in the country very recently, the Ethiopian insurance sector in general and microinsurance in particular are still underdeveloped.

### **1.3 Statement of Problem**

Low income peoples are exposed to risky environments vulnerable to numerous perils like disability, illness, accidental death, agricultural losses such as crop failures, unemployment and loss of property due to fire or theft and disaster of both the manmade and natural varieties. The situation is even more worsened as these households are less able to mitigate and avoid risks than the rest of the population and they are the least able to cope up with the consequence when a crisis occurs because of their economic circumstance (Dror & Piesse, 2014).

Microinsurance is believed to best fit to the majority of people in the developing countries in general and that of Ethiopia in particular where approximately 78% of the population or 61.4million individuals live on less than USD \$2/day (Smith & Chamberlain, 2010). However, according to Morelli et al, (2010), many low-income people in Africa do not understand what insurance is or how it works and therefore, insurance penetration remains low. According to Negpal and Kalra (2012) low income households think that they do not require insurance. This is probably due to lack of confidence in insurers and poor understanding of the risk pooling concept, lack of knowledge related to the benefit of insurance (Link and Wirz 2008). Previous experience with micro insurance also shows that many people do not understand the concept of insurance and how it works (Owuor 2016). In some cases the views of poor people about insurance are negative, i.e. they consider insurance as a product that is reserved for the rich, or something which is totally irrelevant, too expensive or even unfair (Akotey, Osei, and Gemegah, 2011).

According to Daykin & Cresswell (2001) insurance long has been considered a business vested in the public interest because of the key role it plays in economic development and personal security. As a result, the industry has been regulated almost since its birth, starting with the 1575 establishment of the Office of Assurances in Great Britain to coordinate and begin to control the writing of insurance. While regulatory efforts evolve over time and across jurisdictions, their basic purpose remains the same: protect consumers by assuring sound and transparent insurance practices. However, according to Roy (2015) Regulations for micro-insurance currently do not exist in many developing countries. Regulators tend to focus their attention on conventional insurance institutions, which can lead them to set capital requirements too high and place inflexible rules on agents.

According to Clarke and Grenham (2013) demand for disaster microinsurance is likely to be low due to low trust that insurance companies will pay claims in the aftermath of a disaster. As the insurance product's value is contingent on the insurer paying claims, African consumers, especially those who have hitherto not been included in the formal financial system, require a significant level of trust in the insurance company to be convinced to buy or renew a microinsurance policy (Matul et al, 2010).

According to Swiss Re. (2010) We live in a world where approximately four billion people survive on income of less than Four dollars(US\$ 4) per day, of which 1.4 billion were living on less than US\$1.25 per day(below poverty line). They argue that the 2.6 billion living on more than the poverty line could effectively be serviced with commercially viable microinsurance, while those below could be serviced by a combination of microinsurance and government support. The largest potential commercial markets are in the Asia and Pacific region, with Sub Saharan Africa having the largest proportion of below poverty line population. According to A.M. Best Company (2012) Potential market size of microinsurance premium volume is estimate as between US\$30 billion to US\$50 billion, which means the target customers are those whose incomes are approximately US\$500 to US\$ 1,500 per year.

A study carried out by Microinsurance Network, (2015) under Landscape of Microinsurance in Africa only 1.9% of the population of Ethiopia is covered with different microinsurance products. This number is insignificant as compared to the potential market of microinsurance in Ethiopia and other African countries such as Kenya (6.0%), Uganda (6.7%), Ghana (29.6%) and South Africa (64%).

Recently we are witnessing that microinsurance is attracting the attention of many practitioners and policymakers due to the fact that government is considering microinsurance as one of the development agenda in their long term plan in alleviating poverty. There are various international studies conducted on insurance and micro-insurance and there are also various studies on insurance in Ethiopia, very few on microinsurance in Ethiopia and to the best of the researchers knowledge no study conducted on this specific topic in Ethiopia. Ethiopia Being categorized as the poorest country in the world map has a great potential for microinsurance market. However, the market is underserved and as of 2016 microinsurance penetration rate sits at 0.001% in Ethiopia (gross premium income as a percentage of GDP). Therefore, dearth of studies on factors influencing penetration of microinsurance in Ethiopia motivated the researcher to identify and contribute to the industry what factors hinder penetration of microinsurance in Ethiopia from the supplier perspective. On top of these, the researcher determined that the previous studies on microinsurance in Ethiopia focused from the demand side. Accordingly this study complements the existing gap in the research on the microinsurance industry, and to

initiate further research on the topic in the developing countries in general and in Ethiopia in particular.

#### **1.4 Research Questions**

In light of the issues discussed on the above section this study tried to investigate the factors that influence penetration of micro-insurance in Ethiopia. More specifically the study tried to answer the following basic research questions;

1. What is the effect of client awareness on the penetration of microinsurance products among the low income people in Ethiopia?
2. What is the effect of income on the penetration of microinsurance products among the low income people in Ethiopia?
3. What is the effect of product price on the penetration of Micro-insurance in Ethiopia?
4. What is the effect of government regulation on penetration of microinsurance in Ethiopia?
5. What is the effect of product and the institutional trust on the uptake of Micoinsurance products among low income people in Ethiopia?

#### **1.5 Research Objectives**

The general objective of the study was to identify the factors influencing micro-insurance penetration in Ethiopia. More specific objectives of the studies are:

1. To examine whether lack of awareness has contributed to the low penetration of micro-insurance.
2. To determine the effect of income on the penetration of micro-insurance products.
3. To identify whether or not price of the product of micro-insurance influence the penetration of micro-insurance.
4. To find out whether or not government regulations influence the penetration of micro-insurance.

5. To determine the effect of lack of trust of the customer's on Penetration of microinsurance products among low income people in Ethiopia?

### **1.6 Significance of the Study**

To the researchers knowledge this paper is the first in identifying factors influencing penetration of micro-insurance in Ethiopia. The results of this study is significant for insurer, reinsurer and intermediaries active in the markets as well as for those planning to enter existing market by identifying the factors that hinder the micro-insurance success and help them develop appropriate strategies to enhance market penetration. The results are also of interests to policy makers, regulators, and development organizations that work towards enhancing the development of micro-insurance market by integrating to its Grand National policies and strategy that the government has in alleviating poverty.

The study may in addition to the above, be useful to other stakeholders, financiers, and investors in formulating and planning areas of intervention and support towards enhancing microinsurance penetration in Ethiopia. The study is also important to current and potential scholars who have interest in the area of insurance and especially microinsurance. Those intending to study the area of microinsurance will get useful insights and suggestions for further studies.

### **1.7 Scope of the Study**

The scope of this study was limited to identify the relationship between microinsurance penetration rate and factors affecting it of Five (5) insurance companies, the only providers of microinsurance products in Ethiopia. To cope with the available time, only head office and branch offices of these insurance companies located in Addis Ababa are considered; therefore, other branch offices located outside Addis Ababa or in regional cities are not included. Microfinance institutions that provide credit life microinsurance and insurance company who don't provide microinsurance but general insurance product are not included in these study.

The study is also limited to five key variables discussed under conceptual framework. Other variables that might affect penetration of microinsurance in Ethiopia were out of the scope of this study.

The study conducted a cross sectional survey research design. Therefore data were collected on specific time from executive management of the sampled insurance companies for the purpose of the study.

### **1.8 Limitation of the study**

This study focused only from the perspective of micro insurance provider excluding Microfinance Institutions. The study did not incorporate the views of the customers and the general public who may give their insight on what prevents them from buying microinsurance products. The limited number of insurance companies providing microinsurance and few years' available data due to the newness of the product in the country has limited our number of observation. Therefore, the econometric model which was used, multiple Linear regressions , might lead to measurement error and inaccurate inference.

### **1.9 Organization of the paper**

The study will be organized in to five chapters. Accordingly, the first chapter dealt with the introduction part of the study; the second chapter discusses the details of related literature of the study; the third chapter focuses on methodology, the forth chapter deals with data presentation and analysis and finally in chapter five summary of findings and conclusions was drawn based on analysis and possible recommendations have been forwarded based on investigation.

## **CHAPTER 2: Review of Literature**

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This chapter reviews related theories and works of other scholars and researchers done on the area of microinsurance. The chapter presents various views and perspectives of different scholars, which are based on the research objectives. The chapter begins with concepts and definition of microinsurance, explain how insurance penetration is measured and followed by theoretical orientation. In the third and fourth part, an empirical review on the factors influencing penetration of microinsurance has been undertaken leading to a conceptual framework, which is proposed to guide the study respectively. In this chapter the researcher criticizes, reflects and synthesizes.

### **2.1 Concepts and Definition of Microinsurance**

Whether we are aware of it or not, risk pervades our lives. We are vulnerable every day by events that can have severe social, human or financial consequences: property damage, disability, natural disaster, sickness, and accidents in their immeasurable forms and of course death. Of all groups in a society, poor people are the most exposed to risks and yet the least protected against the consequences. In developing countries this means extreme vulnerability of large segments of the population. When exposed to financial shocks, poor households may be forced to make harsh choices, such as reducing food consumption, withdrawing children from school, or using up productive assets to cover the expenses related to the risk event. These strategies put in danger economic and human development prospects, and leave those who have to make such choices stuck in a poverty trap. Risk arises from the possibility of losing economic security and usually stems from the likelihood of unexpected and adverse outcomes. Insurance is a form of risk transfer that can supplement or replace some of these more traditional methods of risk coping mechanism especially where they cannot provide sufficient protection against those risks.

Insurance is a risk management system under which individuals, businesses, and other organizations or entities, in exchange for payment of a sum of money (a premium), share the risk of possible financial loss through guaranteed compensation for losses resulting from certain perils under specified conditions where as microinsurance is simply insurance for low-income people.

There are different approaches about how the term micro in microinsurance can be understood. Firstly, micro can be understood as a financial situation of the clientele, i.e., an insurance targeted at low-income and financially marginalised people in developing countries. Secondly, micro can be understood as characteristic of the product, i.e., an insurance offering limited benefits for small premiums. Thirdly, micro can be understood as characteristic of the process by which the schemes are created and administered. All three ways of interpreting the term micro lead to different definitions of microinsurance and to different answers about what microinsurance is. For this research paper we use the first approach.

According to Churchill (2006) microinsurance is defined as the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. This definition is basically the same as one might use for regular insurance except for the clearly prescribed target market: low-income people. How poor do people have to be for their insurance protection to be considered micro? The answer varies by country, but generally microinsurance is for persons ignored by mainstream commercial and social insurance schemes, persons who have not had access to appropriate products. Of particular interest is the provision of cover to persons working in the informal economy who do not have access to commercial insurance nor social protection benefits provided by employers directly, or by the government through employers.

The International Association of Insurance Supervisors (IAIS), define microinsurance as any form of protection against risks that is designed for and accessed by low-income people, provided by different categories of carriers but operating on basic principles of insurance and funded by premium (IAIS, 2007).

Pursuant to the authority vested in it by Article 4(1), 4(4), 58(2) of Insurance Business proclamation no.746/2012 and article 3(2)(d) of microfinance institutions proclamation no.626/2009, the National Bank of Ethiopia has issued licensing and supervision of microinsurance business directive no. SMIB/1/2015 and under this directive microinsurance is defined as

**“microinsurance”** means an insurance that fulfills the following requirements and which is designed to address the particular risks and insurance need of low income population.

- The maximum sum insured per risk for microinsurance products shall not exceed 1% of

the paid up capital of the insurer.

- The maximum sum insured for a group under a single policy for a risk shall not exceed 1% of the paid up capital of the insurer per person multiplied by the number of insureds in the group.
- Without prejudice to the above condition, the sum insured for credit life microinsurance products shall run up to the outstanding loan amount.

## **2.2 Insurance Penetration**

The insurance penetration ratio is used to measure how deep a country's insurance market is. It is a measure of gross volume of insurance premiums as a percentage of the Gross Domestic Products (GDP) (swiss Re, 2012). A measure of the development of an insurance sector is insurance penetration, defined as gross premium income (GPI) as a percentage of GDP (Ndal, 2011). The level of insurance penetration provides an indicator of the relative size and importance of insurance in the domestic economy, and is calculated as the ratio of direct gross premiums to GDP. (Global insurance market trends, 2016). The ratio is used as an indicator of insurance sector development. In summary a very low insurance penetration rate means high growth opportunity and potential.

According to Schanz(Dr.), Alms and company(2017), with a volume of US\$46 billion, or72%of total African insurance premiums, South Africa is still by far Africa's largest insurance market. Other major markets include Morocco, Egypt, Kenya and Nigeria, with the top 5 markets accounting for 85% of total premiums. But in terms of penetration as of percentage of GDP: South Africa, Namibia, Mauritius, Botswana, and Kenya are ranked top five(5) with penetration rate of 14%, 7.3%, 6%, 3.9%, and 2.9% respectively, while the Ethiopian insurance penetration sits at 0.55%, (Peter and Norman, 2015).

The total identified microinsurance written premiums in Africa amount to almost USD 756 million in 2015, up from USD 387 Million in 2011, and represent 1.1% of the total USD 69 billion premiums generated by the insurance industry across the region. South Africa continues to dominate in terms of microinsurance premiums but several other countries, such as Burkina Faso, Ethiopia, Tanzania and Zambia, wrote premiums that account for a significant share of their respective insurance markets (Microinsurance Insurance Network, 2016).

## **2.3. Theoretical Review of Literature**

Consumer theory assumes that if consumers are perfectly informed, they maximize their utility as a function of consuming various goods, given relative prices, their income and preferences. Changes in prices and income influence how much of different goods rational consumers will buy (Begg et al. 2000). Insurance is expected to be a normal good with a positive income elasticity of demand, implying that the poor are less likely to insure. A price increase of a substitute for insurance is expected to raise the insurance demand, as is a decrease in insurance premium. However, due to uncertainty about the unknown future health, insurance choice is not made based on utility alone but on consumers' expectation about factors such as their health status (Cameron et al. 1988). Thus, theories on decision-making under uncertainty are generally used to describe insurance up take. Among the theories that analyze decision-making under uncertainty are expected utility, prospect theory, endowment effect, status quo bias, and regret & disappointment paradigms.

### **2.3.1 Expected utility (EU) theory**

Under EU theory, insurance demand is a choice between an uncertain loss that occurs with a probability when uninsured and a certain loss like paying a premium (Manning and Marquis 1996). EU theory assumes that people are risk averse and make choices between taking a risk that has different implications on wealth. At the time of insurance choice, consumers are uncertain whether there will be loss or no loss, and of the related financial consequences. Insurance reduces this uncertainty. Through insurance, they can level out their income over two different states, loss or no loss, which makes the aggregate outcome relatively certain. This certainty allows the insured to reach a higher utility in case of loss than those without insurance. Accordingly, the insurance demand reflects individuals' risk aversion and demand for certainty, implying that the more risk averse individuals are, the more insurance coverage they will buy (Begg et al. 2000). This theory is silent about the level of consumers' income and its impact on the insurance choice.

EU theory has been criticized. Laboratory studies have shown that the model's prediction of choice behaviour is poor, and additional factors need to be included such as the societal context about prudent behaviour or regret considerations (Schoemaker 1982). Individuals' insurance decisions may not only be affected by risk aversion but also by the access motive of insurance.

The access motive reflects the gains from the availability of medical care that would otherwise be unaffordable for the poor. Gaining higher access to care when insured may cause the poor to insure if they are unable to obtain needed health care when uninsured. Without insurance, the poor would not have enough money and time to save for an expensive health care procedure, and lending institutions may be reluctant to lend money when the ability of the patient is limited to repay these loans (Nyman 1999). Despite these critiques, EU theory is most commonly used in models of decision-making under risk (Marquis and Holmer 1996). However, other theories have emerged that aim to account for these weaknesses.

### **2.3.2 Prospect theory**

Prospect theory questions the assumptions made by EU theory, and states that the choice is about prospects of gains or losses, and not the level of uncertainty. Individuals assume an optimal risk level for every expected gain or loss. The point from which an individual perceives gains and losses to occur may influence the choice; and gambles are judged in terms of their deviations from this optimal risk level (Kahnemann and Tversky 1979). Applied to the insurance context, prospect theory suggests that people insure from a gain perspective and not because insurance reduces uncertainty.

Given a premium level, people will first assess their risk level and the eventual deviation from it (for example, my health is bad and it could get worse). They may decide not to insure because of a gain prospect: they expect to pay less for their health risk than the deviation from it. This is a risk because the deviation may be greater than expected and cause a loss. So, prospect theory says that, with respect to losses, individuals are risk preferring. Following from this, individuals will only insure if the loss will occur with certainty, and not because they are risk averse as suggested by EU theory (Kahnemann and Tversky 1979).

Prospect theory is silent about the association between household income and the expected deviation from health risk.

### **2.3.3 Endowment effect theory**

The endowment effect assumes that decision-making is affected by individuals' risk aversion about something new. People perceive greater costs in giving something up than benefits in

acquiring something new. Therefore, they will charge a higher selling price for a good than they would be ready to pay for it. They would rather stay with the old if they do not know whether the benefits of an unknown alternative exceed the costs of giving up something well known (Kahnemann et al. 1991). Under the endowment effect, poor individuals will insure if they perceive the benefits of insurance (for example, access to better quality care) as higher than the cost related to giving up being uninsured. Where illiteracy rates are high and patients are not familiar with percentage calculations, paying a co-insurance rate gives ‘mathematical discretion’ to providers, and takes control away from the consumer, who as a consequence might mistrust providers and not insure.

#### **2.3.4 Status quo bias theory**

The status quo bias is similar to the endowment effect. Studies suggest that consumers prefer the status quo they are familiar with instead of undergoing an unknown, innovative medical procedure (Salkfeld et al. 2000). In fact, people consider departures from the status quo as more harmful than beneficial. In addition, individuals tend to stay with the status quo if there is an increasing number of alternatives to choose from, and if choices become more complicated (Kahnemann et al. 1991). This veil of experience appears to determine choices, especially when lacking full information on the alternatives. Marquis and Holmer (1996) found that when presented with hypothetical offers to purchase additional insurance coverage, RAND study participants showed inertia in plan choice, which may be interpreted by the status quo effect or veil of experience. It highlights the importance of information when offering insurance to poor and illiterate groups; particularly, if the concept of insurance is new.

#### **2.3.5 Regret and disappointment theories**

Regret and disappointment theories are based on the assumption that people have a loss aversion and conservative preferences. Individuals try to avoid regret and disappointment and do not just consider the eventual outcome, as suggested by EU theory. They factor in their feelings of regret, in case the decision would have been wrong, and of disappointment, if the outcome does not correspond to what they have expected (Bell 1982, 1986). Hence, individuals may prefer to remain uninsured because they might regret their decision, or be disappointed if they do not benefit from an insurance payout; or they insure to avoid feelings of regret from falling ill while

uninsured. These theories are silent about eventual differences in the amount of regret and disappointment between wealthier and poor individuals.

Despite the criticism of EU theory, none of the other decision-making concepts has provided superior results based on empirical findings on individuals' real market decisions. Based on RAND study data, Manning and Marquis (1996) conducted a robustness check between expected utility and prospect theory, and found that the two theories do not affect results significantly. Even if risk aversion is not the dominant motivation to insure, the influence of other factors in the choice process will not alter results (Manning and Marquis 1996).

## **2.4 Review of Empirical Studies**

### **2.4.1 Client's awareness**

Low-income households feel that they do not need insurance. Lack of confidence in insurance companies and poor understanding of the risk-pooling concept is possibly the reason for that. Previous experience with micro insurance shows that many people do not understand the concept of insurance and how it works. In some cases, the views of poor people about insurance are negative. They see it as the reserve for the rich; something that is irrelevant, too expensive or even unfair (McCord et al. 2006; Akotey et al., 2011). Low demand is often attributed to a lack of understanding of microinsurance concepts and products. But Matul et al (2013) argue that Poor understanding is only one part of the problem, however, a better awareness and knowledge of insurance does not always translate into higher demand.

Carter et al. (2014) identified that Level of knowledge is a well-known practical problem in introducing a relatively complex and state contingent insurance product in an environment where farmers have low education, as is the case in most developing countries. Index insurance is particularly difficult to understand because, with presence of basis risk, payments are not linked to the individual farmer's losses.

A huge challenge for microinsurance schemes is to be understandable for potential and actual clients. The core concept of insurance is spending money in return for an uncertain payout covering a hypothetical event can indeed be quite challenging. The best example is maybe the demand of many newly insured to receive their premium back in case no payout occurs, well

illustrated by a client of a community health insurance in Uganda: "I think that if one spends a year without falling sick, then one should not pay the coming year" (Basaza et al. (2008).

Awareness is important, but does not guarantee demand by itself. Ackah and Owusu (2012) computed an insurance awareness index in Ghana and Some 65 per cent of respondents were aware of at least one type of insurance. Yet, although many people had heard the word 'insurance', they did not appear to understand insurance as a way of preparing for future unforeseen misfortunes.

According to Matul et al. (2010) the level of insurance knowledge was found to have a significant influence on micro-insurance demand. This means that if the informal sector is well informed and educated about the concept of insurance, they will see the value of insurance services, which will impact positively on their demand for micro-insurance services. This calls for an improvement in the level of information given about insurance products to the market particularly, to the informal economy. Such information should be designed to meet the unique needs and backgrounds of the informal sector. The challenge will be to provide this education on a broad scale and in a manner that addresses the needs of different people with varying degrees of literacy (McCord, 2008).

Matul et al (2010) confirmed that although the level of one's knowledge about insurance is positive and significant, the level of one's formal education is not statistically significant. This means that one's level of formal education is not enough to persuade the person to purchase micro-insurance products. Instead, the person's proper understanding and appreciation of the concept of risk pooling or the value of insurance is the most vital factor. Previous study (Outreville, 1996) also offers inconclusive evidence on the effect of education on insurance consumption.

#### **2.4.2 Level of income**

Beenstock et al. (1986), Browne and Kim (1993) and Outreville (1996) claimed that the capacity to afford an insurance premium is directly connected to one's level of income. However, the capacity of low-income households to afford insurance services is not only related to the level of income but also the proper management of their financial resources has a remarkable impact on their access to micro insurance (Matul, 2005). On the other hand Matul et al. (2013) argue that

Liquidity constraints are one of the biggest determinants of demand, but not because the poor have no money; rather, they have insufficient funds at the time of enrolment. Practitioners can mitigate liquidity constraints by scheduling premium payments when money is readily available, for instance after a harvest. Chen et al. (2012) evaluated the effect of deferred premium payments in a pig insurance scheme in China. They offered credit vouchers that allowed farmers to take up insurance while delaying the premium payment until the end of the insured period, coinciding with when pigs are sold and liquidity constraints are relieved. Deferred premium payments increased the purchase of the insurance by 11 percentage points.

Among Africa's low-income groups, a large share of household resources is allocated to the basic necessities of life, and an available budget for insurance is limited. However, the benefits of insurance do allow for households reallocating budget items to finance insurance premiums. For example, part of health expenditures could possibly be allocated to health insurance as to minimize the risk of catastrophic expenses, while not increasing the total budget spent on health. Over 70% of providers agreed fully or partially with the statement that low capacity to pay on the side of the consumers is impairing demand for microinsurance (Matul et al., 2010).

The income variable is statistically significant and positively related to micro-insurance demand. This result corroborates the findings of many researchers on the relationship between income and the demand for insurance. According to Hwang and Gao (2003), income is statistically significant and positively correlated with life insurance consumption in China. (Bhat & Jain, 2006) identified that insurance purchase decision have found income as a significant factor.

### **2.4.3 Price of the product.**

While it is to be expected that lower prices lead to higher demand, it is important to know the extent to which demand responds to changes in prices. By randomly offering different discounts for index-based insurances, Cole et al. (2011) estimate a price elasticity of demand of about 0.7-1.1, suggesting that a 10% increase in price would lead to a 7 to 11% decrease in demand. Hence, the price has a sizable impact on demand. Mobarak and Rosenzweig (2012) find, by randomly offering discounts of 10%, 50% or 75% with respect to the actuarially fair price, a price elasticity of only 0.44. Dercon et al. (2011) observe a reasonably high elasticity to price increases: a 10% increase in prices causes a 7.6 percentage points reduction in demand. When

only looking at the low-trust individuals, this effect becomes bigger (17 percentage points reduction). When offering insurance for free, Karlan et al. (2011) observe an increase from 40% to 100% take up for their rainfall insurance in Ghana. Similarly, Gaurav et al. (2011), in their work in India, offered a total refund of the rainfall insurance premiums if clients did not receive any payout at the end of the contract. This money-back guarantee was thus expected to have a huge impact on the take up rate. Results show that this treatment indeed increases the demand for insurance but, in contrast with Karlan et al. (2011), only by 6.9 percentage points, which means that the overall uptake remains low despite this strong treatment. As this money back guarantee could also be seen as a very generous rebate, this result does not support the idea of rebates as a good way to enhance demand. Although changes in prices generally do have a strong impact on the demand for insurance, this does not necessarily imply that demand at low prices will be high. When demand is very low, a discount can have a big relative impact on take up, but still lead to a low absolute take up. Indeed, even when prices are significantly below actuarially fair prices, Cole et al. (2011) still observe less than 50% take up. Likewise, although Bonan et al. (2011) and Thornton et al. (2010) offer health insurance for free for an initial period, they only reach around 30% take up. Cai et al. (2009), however, observe 90% take up when insurance is heavily subsidized by the government, and strong incentives are given for those selling it. Thus, while the price seems to have a great impact on the willingness to buy insurance, a low price is, in itself, not enough to obtain a high demand.

Several studies have shown that demand for index insurance is very price sensitive. By randomly varying price for a rainfall index insurance offered by BASIX ICICI Lombard in India, Cole et al. (2013) estimated a high price elasticity of demand in the range of -0.66 to -0.88. Demand is also affected by farmers' liquidity position. Giné and Yang (2009) found that demand for rainfall-indexed insurance in Malawi is positively correlated with smallholder maize producers' wealth position. In India, unanticipated random positive liquidity shocks in the Cole et al. (2013) study induced large increases in insurance purchase.

Are discounts an effective way of increasing demand? The answer seems to be yes, in the short run, but price discounts are not a sustainable strategy in the long term, unless permanent subsidies are available. One possible solution is for practitioners to offer initial discounts, perhaps with the help of government or donor subsidies, during which period clients experience

the product, evaluate it, and then renew. Fitzpatrick et al. (2011) tested the effects of subsidizing a health insurance product in Nicaragua for an initial period. They found that while a subsidy significantly increased take-up at first, many clients dropped out after it expired. Even though overall take-up was somewhat higher among those who initially received the subsidies than among those who did not, the results indicate that subsidies were not a cost-effective way of increasing coverage. This finding is consistent with the work of Thornton et al. (2010), also conducted in Nicaragua, where less than 10 per cent of the enrolled clients decided to renew their subscription after the expiry of the subsidies. Their results indicate that those clients who received the highest subsidies were least likely to renew. On the other hand, Bauchet et al. (2013) found that when subsidized coverage was removed from a life insurance product by Compartamos in Mexico, clients purchased more coverage, although they did not purchase enough to achieve their previous subsidized coverage level. When subsidies are used as a temporary tool to promote market development, there is a need for special efforts and incentives to encourage renewals. The experience of Compartamos does support the use of subsidies to develop trust and build an insurance culture, if appropriate value is offered and is evident to clients. Otherwise, removing subsidies can reduce demand, contributing to market failure rather than market development.

#### **2.4.4 Government regulation**

According to Biener et al. (2014) due to the global operations of the IAIS and specific endeavors of particular lawmakers, regulation of microinsurance is receiving increased scrutiny as one way of encouraging the development of a thriving microinsurance market, a market that is considered to have a great deal of potential in alleviating poverty throughout the globe. Just as the product itself is not simply a smaller version of conventional insurance coverage, regulation of microinsurance should not be considered a subset of conventional insurance regulation, but take into consideration the specific needs of the public it is intended to serve as well as issues specific to the microinsurance market itself.

According to McCord et al. (2013) sixteen countries have already adopted some form of microinsurance-specific legal framework, while another nine are working on developing appropriate frameworks for their situations. These 25 countries account for 94% of the total lives

and properties covered in Africa. It is clear that regulation did not push microinsurance in Africa; rather, it appears that a legal framework begins to be considered once a critical mass of coverage is evident. It is less clear whether the lack of regulation has hindered growth and expansion of microinsurance in the region, but the lack of a regulatory framework does seem to create uncertainty among insurers throughout Africa, which more recently appears to be retarding expansion and innovation.

Regulations for micro-insurance currently do not exist in many developing countries. Regulators tend to focus their attention on conventional insurance institutions, which can lead them to set capital requirements too high and place inflexible rules on agents. Policy makers need to obtain a better understanding of the benefits and demands of micro-insurance to promote increased professional, legal and expansive micro-insurance services (Ray, 2015).

Insurance long has been considered a business vested in the public interest because of the key role it plays in economic development and personal security. As a result, the industry has been regulated almost since its birth, starting with the 1575 establishment of the Office of Assurances in Great Britain to coordinate and begin to control the writing of insurance (Daykin&Cresswell, 2001). While regulatory efforts evolve over time and across jurisdictions, their basic purpose remains the same: protect consumers by assuring sound and transparent insurance practices.

#### **2.4.5 Trust**

According to Matul et al., (2013) trust is one of the most important factors of demand, but it goes beyond the reputation of the insurance industry. Practitioners need to implement a multi-dimensional approach to build trust in the product, build trust in the insurer and other institutions involved in the delivery of the product, especially through use of trusted agents and messengers, and leverage trust that already exists in communities. As the insurance product's value is contingent on the insurer paying claims, African consumers, especially those who have hitherto not been included in the formal financial system, require a significant level of trust in the insurance company to be convinced to buy or renew a microinsurance policy. In addition, the development of legal systems to protect customers' interests has been shown to affect customers trust (Schneider, 2005). Trust has also been identified as an important determinant of demand for microinsurance (Radermacher et al, 2006).

A wide range of empirical evidence highlights the importance of trust in the take up decision. Not only do qualitative surveys point to the lack of trust in the management of the scheme as a reason to drop out or not to participate in the scheme (Basaza et al. 2008) but both quantitative and experimental research bring evidence that trust enhances the take up of an insurance product (De Allegri et al. 2006).

The potential trust-building role of experience with the institution that delivers the insurance is highlighted by Cai et al.(2009), who study a government sponsored livestock insurance program. They argue that willingness to participate in the program increases with trust in the authorities. Additionally, it is important to note that a general distrust in financial institutions, or a bad experience with other institutions, can also decrease trust in new insurers. Basaza et al. (2008), for instance, claim that it took two years to overcome such distrust, caused by previous bad experience, through positive experiences with the new insurance.

## 2.5 Conceptual Framework

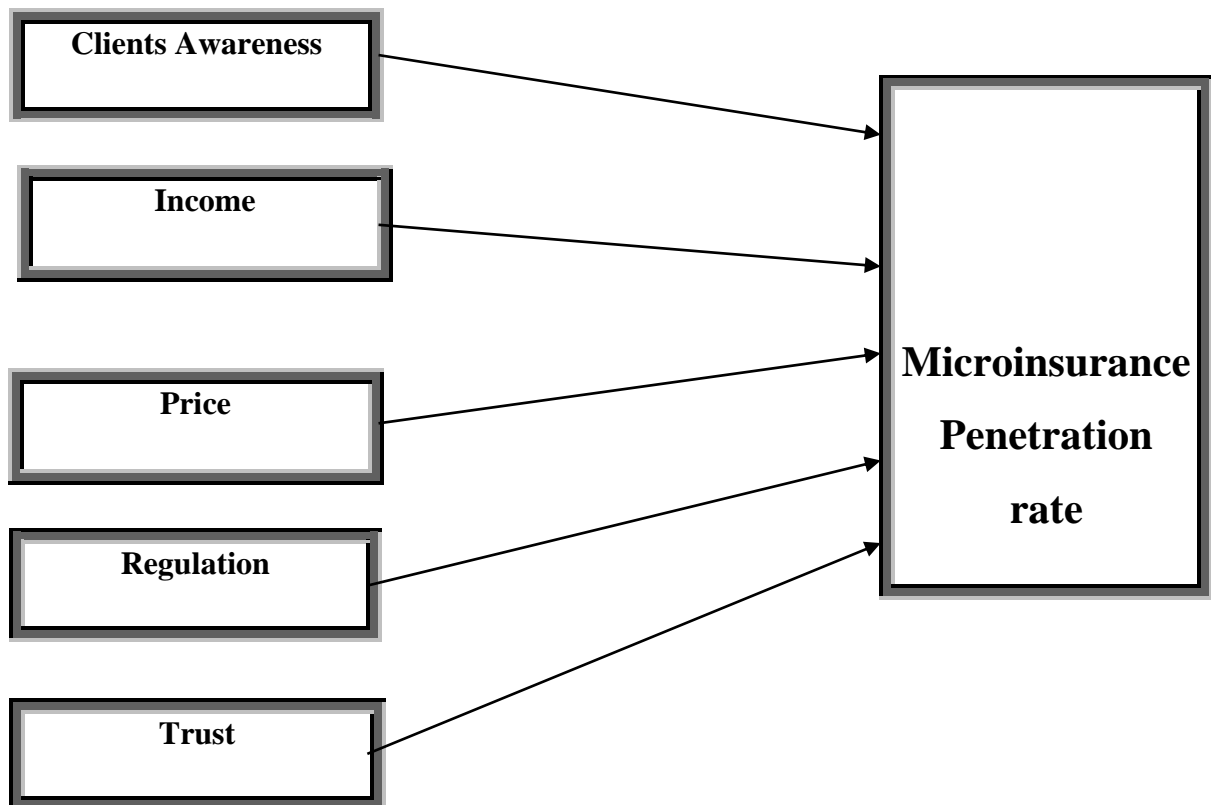
Having discussed the background, defined the research question, research problem & objective of the study and discussed the literature for this study, this part aims at establishing the conceptual framework that frames this study. Conceptual framework is a written or visual presentation that explains either graphically, or in narrative form, the main things to be studied, the key factors, concepts or variables and the presumed relationship among them”. (Miles and Huberman, 1994, P18)

The following conceptual model is formulated to reveal the relationship between dependent variables: Clients Awareness, level of Income, Product Price, Government Regulation & Trust and the independent variable microinsurance penetration rate in Ethiopia.

**Figure 2.1 Conceptual Framework**

**Independent Variables**

**Dependent variable**



**Source: Developed based on previous research's**

## **CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY**

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### **3.1 Introduction**

This chapter outlines the research design and methodology regarding the identification of factors influencing penetration of microinsurance in Ethiopia. In Section 3.2 the research design will be discussed. In Section 3.3 the source of data and mode of data collection including the instruments used for data collection will be discussed. In Section 3.4 targets population of the study will be discussed. Finally in section 3.5 and 3.6 data analysis techniques & tools and model specification were discussed respectively.

### **3.2 Research design**

According to Sekaran (2000) research can be described as a systematic and organized effort to investigate a specific problem to provide a solution. Draper and Smith (1966) stated it is the overall plan of how the researcher intends to implement their projects in practice. It is also stated as the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose in procedure. The purpose of research design is to ensure that the evidence obtained enables us to answer the initial objective clearly.

This study was adopted an explanatory & descriptive survey research design. Explanatory types of study are used to show the relationship between variables. According to Neuman (2010) explanatory research is used to identify cause and effect among variables and according to Thornhill (2008), explanatory research is practical when the aim is to clarify ones understanding of a specific problem. And it is explanatory since it is enrich and support the previous theories through comparing our findings with research questions. Descriptive research refers to research studies that have as their main objective the accurate portrayal of the characteristics of persons, situations or groups (Polit & Hungler 2004). This approach was appropriate for the study as it enabled higher level analysis such as correlation and regression analysis that allow for identifying the nature, strength and extent of the association between the variables. The descriptive survey method is preferred because it ensures complete description of the situation, making sure that there is minimum bias in the collection of data (Kothari, 2008). The method is deemed as an efficient way to obtain information needed to describe opinions and views of

insurance companies offering microinsurance product on the factors that influence microinsurance penetration in Ethiopia.

### 3.3 Target population and Sample Size

According to Best and Kahn (2016), a population is any group of individuals who have one or more characteristics in common that are of interest to the researcher. The population may be all the individuals of a particular type or a more restricted part of that group.

As of 2017, according to NBE, there are Seventeen (17) insurance companies in Ethiopia, one government owned and 16 private insurance companies. In this study the targeted population consists of five (5) insurance companies selling microinsurance products. Therefore the target population of the study was all (i.e Five) insurance companies engaged in selling microinsurance product in the country. The sample size was determined by the researcher to answer the research question stated above using purposive sampling methods. In this study a sample of 130 was drawn to identify respondents from the whole population and 9 years data from the entire microinsurance provider. Therefore the study was applied non probability sampling technique.

These respondents are selected purposively from the whole population because they are experts on the area and believed can provide better opinion on the area than any other persons in the company.

Description	Position					Total selected respondents
	CEO	Deputy CEO	Department Managers	Division managers	Branch Managers	
Number of Respondents	5	8	15	21	81	130

**Table 3.1 Sample size**

**Source: Field survey, Insurance companies**

### **3.4 Data source and collection method**

Data collection is the most important process in a research and it includes two types: primary and secondary data collection methods (Lim and Ting, 2012). According to Sekaran (2000), the researcher must specifically set up respondents for the research individuals, groups, and a panel of respondents whose opinion may be sought on specific issues.

As stated by Khan (2011) primary data collection methods helps the researcher to do more efficient analysis of the research through collecting fresh information related to the research matter and it can be qualitative or quantitative.

In this study both primary and secondary data were used. The primary data was generated through the use of self administered survey questionnaires from executive management member of the selected insurance companies (Branch managers and above) and Secondary data was extracted from financial statement of the respective insurance companies. Questionnaires were distributed for selected executive management members of insurance companies in the country. The questionnaire's that were used are 5 point likert scale.

### **3.5 Data Analysis techniques and Tools**

The study adopted a quantitative techniques based on primary and secondary data that were collected from selected insurance companies who provide microinsurance products. This study also used econometric and Multiple Linear regression model to measure factors influencing penetration of microinsurance in Ethiopia. The tool used to analyze the data was Statistical package for social sciences (SPSS version 23).

### **3.6 Model Specification**

This study used Multiple Linear regressions model to determine the most significant explanatory variables affecting penetration of microinsurance in Ethiopia.

The general model for this study is presented as;

$$Y_i = \beta_0 + \beta_i X_i + \epsilon_i$$

Where  $Y_i$  is dependent variable, the right hand side represents the independent variables,  $\beta$  represents the coefficient of the explanatory variables and  $\epsilon$  is the error term.

The specific model developed for the study was:

$$MIPR = \beta_0 + \beta_1(CA) + \beta_2(P) + \beta_3(I) + \beta_4(GR) + \beta_5(T) + \varepsilon$$

Where,  $\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  are the co-efficients of the respective independent variables and  $\varepsilon$  is the error term.

**MIPR** =microinsurance penetration (Measured by annual growth written premium divided by Countries GDP)

**CA**= Clients awareness of microinsurance products, is an explanatory variable and measures how one's level of insurance product awareness or knowledge may influence micro insurance purchase.

**P**= Price of microinsurance products, it is an independent variable and measures how flexibility in the price of the microinsurance products can urge low-income earners to buy.

**I**= Level of Income, is an explanatory variable which measures how an increase in the income level of a target market will influence micro-insurance purchase decision.

**GR**= Government Regulation, it measures how well the insurance industry is regulated and protect the interest of policyholders.

**T**= Trust on the insurance companies, it measures the impact of low income people's perception On microinsurance provider (insurers) or institutions.

Except the dependent variable all the independent variables were measured on a five point Likert scale where strongly disagree is 1 and strongly agree is 5.

## **CHAPTER FOUR: Data Analysis, Interpretation and Discussion**

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### **4.1 Introduction**

This study sought to identify the factors affecting penetration of microinsurance in Ethiopia. The results obtained were presented in form of tables. The five independent variables that were studied were awareness, level of income, price, Government Regulation and Trust while the dependent variable was microinsurance penetration rate.

This chapter presents the results of the application of the variables using techniques mentioned in chapter three. Particularly, the data analysis was done in line with specific objectives where patterns were investigated, interpreted and implications drawn on them. The results have presented analysis of correlation and regression results that test the relationship between microinsurance penetration and the independent factors affecting it.

The study initially had sampled a total of 130 respondents drawn from different insurance company providing microinsurance products . Accordingly data could be gathered from 110 respondents which represented 84.6% of the sampled respondents. According to Mugenda and Mugenda (2003), a 50% response rate is adequate, 60% good and above, while 70% is rated very good.

## 4.2 Characteristics of Background Variables

**Table 4.1** *Frequency and Percentage of Background Variables*

<b>Position</b>	Chief Executive Officer	1	.9
	Executive Officer	4	3.6
	Department Manager	13	11.8
	Division Manager	20	18.2
	Branch Manager	72	65.5
	Total	110	100.0
<b>Educational Level</b>	First degree	87	79.1
	Masters	23	20.9
	Total	110	100.0
<b>Work Experience</b>	Less than 5 years	2	1.8
	5 to 10 years	22	20.0
	11 to 15 Years	33	30.0
	16 to 20 years	21	19.1
	more than 20 years	32	29.1
	Total	110	100.0

Table 4.1 shows frequency and percentage of background variables of participants participated in this study. A total of 110 participants involved in this study. The majority of participants (65.5%) were working as branch managers, 18.2% as Division managers and 11.8% as department managers. Whereas minorities of participants, 3.6% and 0.9%, were working in a position of executive officer and chief executive officer respectively. As far as educational level of participants is concerned, the majority, 79.1%, were having educational qualification of Bachelor Degree whereas the remaining minorities, 20.9%, were having educational level of MA/MSc.

Finally, for work experience of participants, almost equal proportions of participants, 30% and 29.1%, were having 11-15 years and more than 20 years of service in their organization respectively. Similarly, almost equal proportions of participants, 20% and 19.1%, were having 5-10 years and more than 16 to 20 years of service in their organization respectively. The remaining 1.8% of participants was having less than 5 years of work experience in their organization.

From the background information like position held by respondents in the company, educational level and work experience we can conclude that the information collected regarding the subject was from the appropriate person and can be trusted to draw conclusion for this study.

### 4.3 Descriptive Statistics

The descriptive statistics of the dependent and explanatory variables for the sample Insurance Companies were summarized in table 4.2. Furthermore, the table also shows the mean, standard deviation, minimum and maximum values for the dependent and independent variables. The interpretation was made using mean of each independent variable.

**Table 4.2 Descriptive statistics**

	Mean	Maximum	Minimum	Standard Deviation	Count
MIPR	<b>0.001048984</b>	<b>0.006837754</b>	<b>0.000105183</b>	<b>3.68404E-06</b>	<b>110</b>
Awareness	<b>4.06</b>	<b>5.00</b>	<b>3.40</b>	<b>.33</b>	<b>110</b>
Income	<b>2.05</b>	<b>3.00</b>	<b>1.40</b>	<b>.37</b>	<b>110</b>
Price	<b>3.81</b>	<b>4.71</b>	<b>2.86</b>	<b>.36</b>	<b>110</b>
Regulation	<b>2.22</b>	<b>3.29</b>	<b>1.29</b>	<b>.42</b>	<b>110</b>
Trust	<b>3.80</b>	<b>5.00</b>	<b>2.80</b>	<b>.44</b>	<b>110</b>

**Source: Field survey and secondary data; Generated from SPSS**

Table 4.2 shows the descriptive statistics of the study. The mean MIPR (annual growth written premium divided by countries GDP) was **0.001048984** percent with the standard deviation of **3.68404E-06**. This means that MIPR in Ethiopia Insurance Companies are low.

The client awareness variable has a mean of 4.06 and a SD of 0.33. This shows that most of the respondents have perceived that low income households have limited understanding of the risk pooling concept and limited knowledge of the insurance terms and product. Therefore, increasing the client awareness has a positive impact on their understanding of the concepts of insurance, and insurers will have to make a positive use of this in their product design.

The mean value of 2.05 for the income variable indicates that the respondents were perceived low income households can't afford to pay insurance premium after covering their basic necessities. This indicates that many low income people have no budget to pay for insurance after covering their basic necessities and thus insurance companies should set price that does not compromise the ability of clients to pay for essential items such as food and shelter.

The mean value of 3.80 for price of product is an indication that most of the respondents perceived that MIPR is highly sensitive to price increase and decrease. The existing price set for microinsurance product is not affordable for low income households and require subsidies from government or donors. Therefore, as price of the product is more subsidized or discounted the uptake of microinsurance will increase.

The government regulation variable has a mean of 2.22 and a SD of 0.42. This shows that most of the respondents have perceived that the microinsurance industry in Ethiopia does not have a regulatory framework that is designed to ensure the stability of the microinsurance system and to protect the interest of policyholders and it has got less attention from the regulatory body. Therefore, improving government regulation and giving appropriate attention to the industry from the regulatory body has a positive impact on uptake of microinsurance.

The trust variable has mean value of 3.81 and a S.D of 0.44. This indicates that most of the respondents perceived that low income households have no trust in the insurance companies to buy or renew a microinsurance policy that they think they will not be indemnified in the aftermath of a disaster. Therefore, this shows that trust is most important among low income people to enroll for microinsurance scheme.

The mean of awareness, price and trust were 4.06, 3.81, and 3.80 respectively. On the scale which was used to measure these variables, four refers to "big". Therefore, the mean of 4.06, 3.81, and 3.80 indicates that most of the respondents agree that these variables have significant impact on the microinsurance penetration.

#### **4.4 Correlation Analysis**

According to Reimann, Filzmoser, Garrett and Dutter (2008) correlation analysis estimates the extent of the relationship between any pair of variables. The extent of the relationship between any two variables is expressed in terms of correlation coefficient. The correlation coefficient is a measure of this relationship and depends on the variability of each of the two variables. Correlation coefficient has both magnitude and direction. As a result, correlation coefficient can take a number with + or – sign (Reimann et.al, 2008).

Pearson product moment correlation is one of the commonly used methods to calculate a correlation coefficient. This method result in a number between  $-1$  and  $+1$  that expresses how closely the two variables are related,  $\pm 1$  shows a perfect 1:1 relationship (positive or negative) and  $0$  indicates that no systematic relationship exists between the two variables (Reimann et.al, 2008). Regarding the magnitude of correlation coefficient, Cohen (1988) stated that a correlation coefficient below  $\pm 0.29$  can be considered as small or weak, correlation coefficient from  $\pm 0.30$  to  $\pm 0.49$  is considered to have medium correlation and correlation coefficient from  $\pm 0.50$  to  $\pm 1.00$  is considered to have large or strong correlation.

**Table 4.3 Correlation Statistics between Independent Variables and Dependent Variable**

		<b>Correlations</b>					
		<b>CA</b>	<b>I</b>	<b>P</b>	<b>GR</b>	<b>T</b>	<b>MIPR</b>
<b>CA</b>	Pearson	<b>1</b>	<b>-.580**</b>	<b>-.127</b>	<b>-.079</b>	<b>.131</b>	<b>.372**</b>
	Correlation						
	Sig. (2-tailed)		<b>.000</b>	<b>.185</b>	<b>.409</b>	<b>.174</b>	<b>.000</b>
	N	<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>
<b>I</b>	Pearson		<b>1</b>	<b>.812**</b>	<b>.832**</b>	<b>-.579**</b>	<b>.010</b>
	Correlation						
	Sig. (2-tailed)			<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.918</b>
	N		<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>
<b>P</b>	Pearson			<b>1</b>	<b>.867**</b>	<b>-.332**</b>	<b>-.001</b>
	Correlation						
	Sig. (2-tailed)				<b>.000</b>	<b>.000</b>	<b>.997</b>
	N			<b>110</b>	<b>110</b>	<b>110</b>	<b>110</b>
<b>GR</b>	Pearson				<b>1</b>	<b>-.517**</b>	<b>.084</b>
	Correlation						
	Sig. (2-tailed)					<b>.000</b>	<b>.385</b>
	N				<b>110</b>	<b>110</b>	<b>110</b>
<b>T</b>	Pearson					<b>1</b>	<b>.780**</b>
	Correlation						
	Sig. (2-tailed)						<b>.000</b>
	N					<b>110</b>	<b>110</b>
<b>MIPR</b>	Pearson						<b>1</b>
	Correlation						
	Sig. (2-tailed)						
	N						<b>110</b>

**\*\***. Correlation is significant at the 0.01 level (2-tailed).

**Source: Field survey and secondary data; Generated from SPSS**

Table 4.3 shows correlation between dimensions of independent variables (Awareness, Income, Price, Government regulation and Trust) and dependent variable, MIPR. As can be seen in table 4.3, MIPR had statistically positive significant relationship with client awareness and Trust. This implies that as one variable increase, for example client awareness, the other variable or Microinsurance penetration (MIPR) also increases and vice-versa. On the other hand microinsurance penetration (MIPR) had no statistically significant relationship with price of

microinsurance products (premium), government regulation and income,  $p > 0.05$  which was contrary to what was expected. There was strong correlation between MIPR and Trust,  $r = 0.780$ ,  $p < 0.01$  and medium correlation between MIPR and awareness,  $r=0.372$ ,  $p < 0.01$ . However, the correlation between MIPR and Income ( $r=0.010$ ,  $p>0.05$ ), MIPR and Price ( $r = -0.001$ ,  $p > 0.05$ ), MIPR and regulation ( $r = 0.084$ ,  $p > 0.05$ ), was weak.

The correlation matrix in Table 4.3 shows that MIPR (dependent variable) was positively correlated with Awareness, Income, Regulation and Trust. However, Price of the product has negative correlation with MIPR.

## **4.5 Multiple Linear Regressions**

The researcher conducted a multiple linear regression analysis to determine the extent to which the four independent variables (Clients awareness, level of income, price and trust) influenced the dependent variable microinsurance penetration rate in Ethiopia. To conduct Multiple Linear regressions, normality, multicollinearity and heteroscedasticity tests were conducted on the data.

### **4.5.1 Tests of assumptions for Multicollinearity**

The variables (Awareness, Income, Trust, Price, Regulation and dependent variable, MIPR) have shown insignificant and significant relationship with each other which have a correlation coefficient of less than 0.8 for most of the variables. However, Government regulation is highly correlated with Income and Price with Pearson correlation( $r$ ) coefficient value of 0.832 and 0.867 respectively. Therefore, after conducting Variance inflation factor test for this variable, government regulation, it is found to have VIF of above the threshold ( $> 10$ ). This indicates that government regulation has strong correlation with Income and Price (see table 4.3). Since proceeding with this fact violates the assumption of multicollinearity, government regulation is excluded to conduct Multiple Linear regressions.

In addition the assumption of multicollinearity can also be assessed using SPSS as part of multiple regression procedure using Tolerance and VIF values.

### 4.5.2 Tolerance

Tolerance is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model and is calculated using the formula  $(1 - R^2)$  for each variable. If this value is greater than 0.10, it indicates that the multiple correlation variables is low which suggests that there is no violation of the assumption of multicollinearity. As can be seen from table 4.7 the tolerance value for each independent variable was greater than 0.10 therefore, this also suggests that the assumption of multicollinearity was not violated. Therefore, the predictor variables Income, Price, Trust and clients awareness has a tolerance value of 0.232, 0.311, 0.599 and 0.979 respectively.

### 4.5.3 VIF (Variance inflation factor)

VIF (Variance inflation factor) is just the inverse of the Tolerance value. VIF values less than 10 would indicate no violation of the assumption of multicollinearity. Table 4.6 below shows that the VIF value for all predictor variables was less than 10. This also indict that the assumption of multicollinearity was not violated. Therefore, the predictor variables Income, Price, Trust and clients awareness has a VIF value of 4.304, 3.220, 1.669 and 1.022 respectively

**Table 4.4 Collinearity Statistics Test of Independent Variables**

CollinearityDiagnostics <sup>a</sup>								
Model	Dimension	Eigenvalue	Condition Index	(Constant)	Variance Proportions			
					I	P	T	CL
1	1	<b>4.953</b>	<b>1.000</b>	<b>.00</b>	<b>.00</b>	<b>.00</b>	<b>.00</b>	<b>.00</b>
	2	<b>.037</b>	<b>11.588</b>	<b>.00</b>	<b>.08</b>	<b>.05</b>	<b>.00</b>	<b>.02</b>
	3	<b>.006</b>	<b>28.218</b>	<b>.00</b>	<b>.41</b>	<b>.60</b>	<b>.01</b>	<b>.16</b>
	4	<b>.004</b>	<b>35.704</b>	<b>.01</b>	<b>.19</b>	<b>.29</b>	<b>.03</b>	<b>.73</b>
	5	<b>.000</b>	<b>130.489</b>	<b>.98</b>	<b>.32</b>	<b>.06</b>	<b>.96</b>	<b>.09</b>

a. Dependent Variable: Penetration

**Source: Field Survey and secondary data; Generated from SPSS**

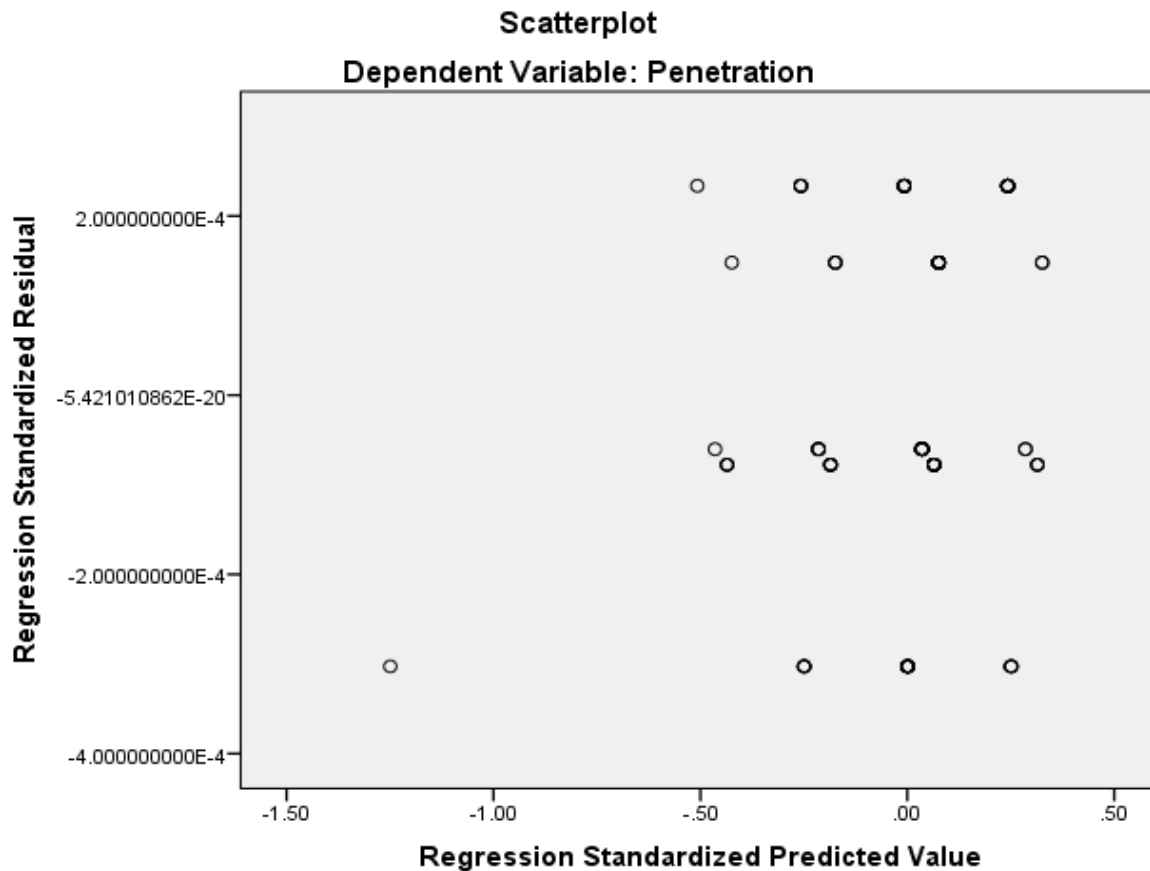
In order to examine collinearity, we first identify all condition indices above the threshold value of 30. Then for all condition indices exceeding the threshold, we identify variables with variance proportions above 0.9. A collinearity problem is indicated when a condition index identified as above the threshold value accounts for a substantial proportion of variance (0.90 or above) for

two or more coefficients. Thus each rows in the matrix with the proportion exceeding 0.90 for at least two coefficients among the corresponding variables. The collinearity diagnostics table 4.4 above satisfies the requirement of collinearity tests. Therefore there are no multicollinearity problems among the variables.

#### **4.5.4 Tests of Assumption for Homoscedasticity**

Homogeneity of variance or homoscedasticity assumption states that the variances of the same variable, selected from independent samples, will be approximately equal. In regression analysis, this assumption states that the variances of the  $Y$ s, for each  $X$ , will be approximately equal. The standard suggestion for examining the assumption of homoscedasticity in regression analysis is to plot the predicted  $Y$  values against the residual values. Homoscedasticity is indicated when these values are not spread or fan out from left to right or right to left. In this study as revealed in figure 4.1, the scatterplot shows that the points are concentrated around 0 which confirms that no violation of homoscedasticity.

**Figure 4.1, Scatter plot of Microinsurance Penetration**



#### **4.5.5 Tests of assumptions for Outliers**

Outliers can also be detected from the Scatter plot. As can be seen from the above figure, the scatterplot shows that there was no dot which is very far from the other dots. This indicates that there were no major outliers in the current study (see figure 4.1).

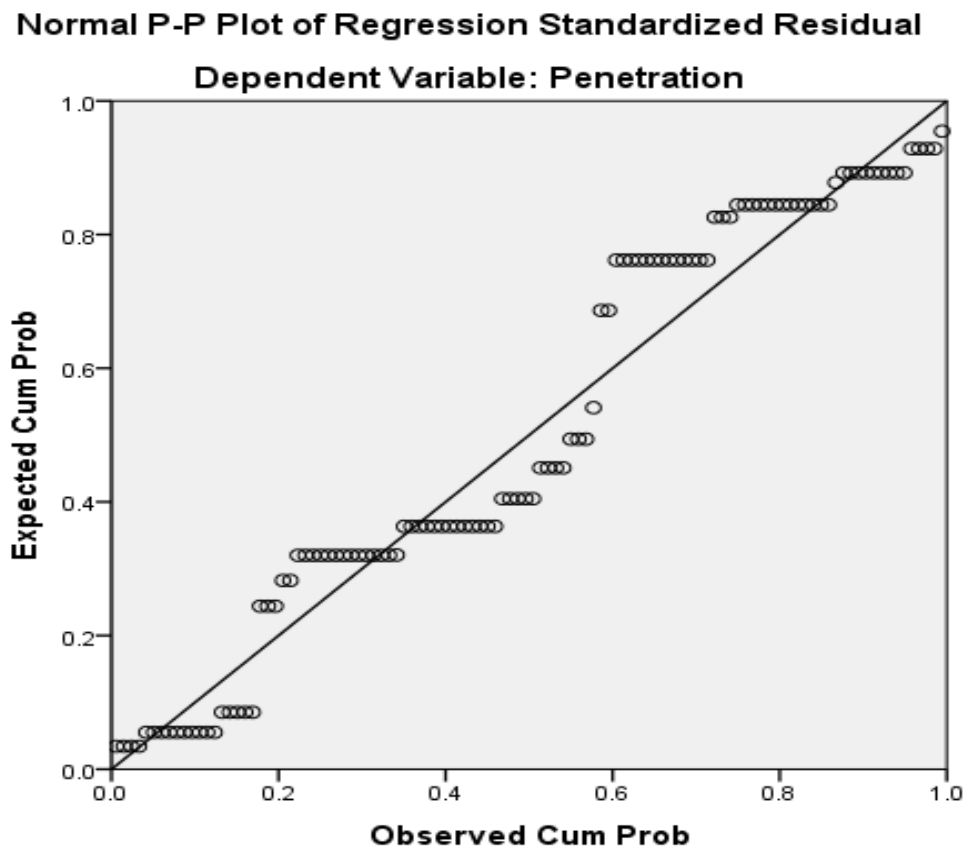
#### **4.5.6 Tests of assumptions for independence of residuals**

In the Scatterplot of the standardized residuals, the residuals were roughly rectangular with most of the scores concentrated in the center, along the line 0. This proposes that there was no violation of the assumption of independence of residuals (see figure 4.1).

### 4.5.7 Tests of assumptions for normality

The assumption of linearity can be checked by inspecting the Normal Probability Plot (P-P) of the Regression Standardized Residual and the Scatterplot shown as part of the analysis. If points lie in a reasonably straight diagonal line from bottom left to top right in the Normal P-P plot, no major deviation from normality can be suggested. In the present study, we can easily see from the Normal P-P plot that points line in a reasonably straight diagonal line from bottom left to top right for all dependent variables (see figure 4.2). This suggests that the assumption of normality was not violated.

Figure 4.2, P-P plot of Microinsurance penetration



**Table 4.5 The Influence of Predictor Variables on dependent variable**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	<b>.989<sup>a</sup></b>	<b>.979</b>	<b>.978</b>	<b>.000189566383</b>

a. Predictors: (Constant), Awareness, Income, Trust, and Price

b. Dependent Variable: MIPR

**Source: Field Survey and secondary data; Generated from SPSS**

Table 4.5 shows the value of adjusted R square was 0.978. This value tells how much of the variance in the dependent variable, MIPR, is explained by the model (Awareness, Income, Trust, and Price). This means that the model explains 97.8% (multiplying R Square value with 100) of the variance in the dependent variable (MIPR).

#### **4.6 Analysis of Variance**

Analysis of Variance (ANOVA) was used to test the significance of the regression model in relations to the differences in means of the dependent and independent variables.

**Table 4.6 Goodness of Fit – ANOVA Result**

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	<b>.000175</b>	<b>4</b>	<b>.00004363</b>	<b>1214.031</b>	<b>.000<sup>b</sup></b>
	Residual	<b>.000004</b>	<b>105</b>	<b>.00000004</b>		
	Total	<b>.000178</b>	<b>109</b>			

a. Dependent Variable: Penetration

b. Predictors: (Constant), Awareness, Income, Trust, and Price

**Source: Field Survey and secondary data; Generated from SPSS**

Table 4.6 shows the goodness of fit results of linear multiple regressions with MIPR as the dependent variable and variables (Awareness, Income, Trust, and Price) as predictors. The model tells that there was a statistically significant relationship between MIPR and predictor variables,  $F(4,105) = 1214.031, p < 0.001$ . This shows that the model was significant.

**Table 4.7 Regression coefficients of predictor variables in predicting the dependent variable**

		<b>Coefficients<sup>a</sup></b>						
		Unstandardized		Standardized		Collinearity		
		Coefficients		Coefficients		Statistics		
Model		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	<b>-.0510</b>	<b>.001</b>		<b>-62.058</b>	<b>.000</b>		
	I	<b>.0030</b>	<b>.000</b>	<b>1.125</b>	<b>38.184</b>	<b>.000</b>	<b>.232</b>	<b>4.304</b>
	P	<b>-.0020</b>	<b>.000</b>	<b>-.490</b>	<b>-19.246</b>	<b>.000</b>	<b>.311</b>	<b>3.220</b>
	T	<b>.0125</b>	<b>.000</b>	<b>1.273</b>	<b>69.381</b>	<b>.000</b>	<b>.599</b>	<b>1.669</b>
	CA	<b>.0002</b>	<b>.000</b>	<b>.031</b>	<b>2.149</b>	<b>.034</b>	<b>.979</b>	<b>1.022</b>

a. Dependent Variable: Penetration

**Source: Field Survey and secondary data; Generated from SPSS**

Table 4.6 shows the regression coefficients of predictor variables and their level of influence on the criterion variable, MIPR. In order to assess the relative influence of predictor variables (Awareness, Income, Trust, and Price) on the criterion variable, multiple linear regression analysis was computed. The table 4.6 shows that, all the predictor variables (Awareness, Income, Trust, and Price) made a statistically significant prediction in predicting the dependent variable, MIPR.

Beta value shows the relative contribution or influence of each predictor variable to the dependent variable (criterion variable). The Beta value for predictor variable, trust was 0.012 which implies that this predictor variable made the first strong positive and statistically significant influence in explaining or predicting the dependent variable (MIPR) when the variance explained by all other variables in the model is controlled for.

In addition, predictor variable, income, made a statistically significant positive influence to the dependent variable with Beta value of 0.003. This indicates that income made the second strong positive influence in predicting the criterion variable, MIPR. Moreover predictor variable Price made the third strong negative influence/contribution in predicting the dependent variable, with Beta value of -0.002.

Finally, the remaining predictor variable, Client awareness, made the least strong statistically positive significant contribution/influence in determining the dependent variable with Beta value of 0.000.

In general, the study explored the relationship between MIPR and five independent variables (Awareness, Income, Trust, Price and Regulation) with the expectation that there are statistically significant relationships between MIPR and independent variables. The correlation results of this study indicated that the relationship between MIPR and independent variables Trust and Clients awareness were statistically significant at ( $p < 0.01$ ).

Regression result also indicated that the model (Awareness, Income, Trust and Price) explained 97.8% of the variance in the dependent variable (MIPR). In addition, all predictor variables (Awareness, Income, Trust and Price) made statistically significant influence (effect) in predicting the dependent variable, MIPR. Therefore, the specified model which was:

$$MIPR = \beta_0 + \beta_1(CA) + \beta_2(P) + \beta_3(I) + \beta_4(GR) + \beta_5(T) + \varepsilon$$

Is modified as:

$$\widehat{MIPR} = -0.051 + 0.0002(CA) - 0.002(P) + 0.003(I) + 0.0125(TR)$$

From the above regression model, one unit improvement in client's awareness would result in an increase of 0.0002 in microinsurance penetration. A one unit reduction in price of microinsurance product yield 0.002 increases in microinsurance penetration. A one unit increase in level of income would result in an increase of 0.003 in microinsurance penetration. While An improvement of trust on microinsurance provider would result in 0.012 increases in microinsurance penetration. Trust had the greatest effect on microinsurance penetration, followed by level of income and price while the client's awareness had the least effect on microinsurance penetration. All the variables were significant. The ANOVA results indicated a p value of 0.000 was less than 5%. This implied that the model developed was significant at 95% confidence level and hence could be used in prediction and decision making. This implied that awareness, level of income; price, and trust have significant effect on microinsurance penetration.

## **4.7 Discussion of results**

The preceding sections presented the overall results and interpretation of the study. Thus, this section discussed analyses of the results for each explanatory variable and their effect on microinsurance penetration. The results provide answers to our five research questions with varying levels of clarity.

### **4.7.1 The Client's awareness and the microinsurance penetration**

Our first question was concerned to know effect of client's lack of awareness on the Penetration of microinsurance in Ethiopia insurance companies. Accordingly client's lack of awareness was found to have a significant effect on micro-insurance penetration. This means that if the microinsurance potential customers are well informed about the concept of risk pooling, benefit of insurance, and how insurance works they can understand the value of insurance which affect positively the interest to buy microinsurance which results in high uptake of microinsurance. This calls for awareness creation about microinsurance products in the potential target market particularly, low income people.

The result of this study is consistent with McCord et al. (2006) and Akotey et al. (2011) that argues many people do not understand the concept of insurance and how it works. In some cases, the views of poor people about insurance are negative. They see it as the reserve for the rich; something that is irrelevant, too expensive or even unfair. Previous studies (Carter et al., 2014; Basaza et al., 2008; Ackah and Owusu, 2012 and Matul et al, 2010) also offer similar evidence on the effect of lack of client's awareness on microinsurance demand.

### **4.7.2 The Level of income and the microinsurance penetration**

Our second question is concerned to know effect of income on the uptake of microinsurance products among the low income people in Ethiopia. The income variable is statistically significant and positively related to micro-insurance penetration. This means as the level of income of low income people increases the uptake of microinsurance product increases which results in high microinsurance penetration.

This result agrees with the findings of many researchers on the relationship between income and the demand for insurance. According to Hwang and Gao (2003), income is statistically

significant and positively correlated with life insurance consumption in China and also Bhat and Jain (2006) who have analysed the insurance purchase decision have found income as a significant factor. Further Beenstock et al. (1986), Browne and Kim (1993) and Outreville (1996) claimed that the capacity to afford an insurance premium is directly connected to one's level of income. But Matul (2005) provide a contradicting view that the capacity of low-income households to afford insurance services is not only related to the level of income but also the proper management of their financial resources. Matul et al. (2013) argue that Liquidity constraints are one of the biggest determinants of demand, but not because the poor have no money; rather, they have insufficient funds at the time of enrolment.

#### **4.7.3 The Price of the product and the microinsurance penetration**

Our third question is concerned to know effect of price of the product on the penetration of Micro-insurance in Ethiopia insurance companies. Accordingly it is found that the price of the product is statistically significant and negatively correlated with microinsurance penetration. This means that as more discount is given on the existing price of microinsurance products or the premium is highly subsidized by government or donors more customer will buy microinsurance products which will results in increase of microinsurance penetration.

This result corroborates the findings of many researchers on the relationship between Price and the demand for insurance. By randomly offering different discounts for index-based insurances, Cole et al. (2011) estimate a price elasticity of demand of about 0.7-1.1, suggesting that a 10% increase in price would lead to a 7 to 11% decrease in demand. Dercon et al. (2011) observe a reasonably high elasticity to price increases: a 10% increase in prices causes a 7.6 percentage points reduction in demand. When offering insurance for free, Karlan et al. (2011) observe an increase from 40% to 100% take up for their rainfall insurance in Ghana. On the other hand, even if prices are significantly below actuarially fair prices, Cole et al. (2011) still observe less than 50% take up. Similarly, although Bonan et al. (2011) and Thornton et al. (2010) offer health insurance for free for an initial period, they only reach around 30% take up. Cai et al. (2009), however, observe 90% take up when insurance is heavily subsidized by the government, and strong incentives are given for those selling it. Therefore, while the price seems to have a great impact on the penetration of microinsurance, a low price is, in itself, not enough to obtain a high demand.

#### **4.7.4 The government regulation and the microinsurance penetration**

Our fourth question concerned to know the effect of government regulation on the low penetration of the micro insurance. Accordingly when correlation analysis was conducted government regulation was found highly correlated with level of income and price of the microinsurance product. Therefore, due to this fact this variable, government regulation, was excluded and regression was run for the remaining four variables. However, this does not mean that government regulation has no effect on microinsurance penetration. But it has almost similar effect with those variables it is correlated with.

#### **4.7.5 The trust and the microinsurance penetration**

Our last question is concerned to know the effect of lack of trust on microinsurance penetration. Accordingly it was found that trust has statistically significant and positive effect on microinsurance penetration. This means that as low income earners bad perception about insurance that they will not be indemnified in the aftermath of loss improves has a positive and significant impact on the microinsurance penetration. This result corroborates the findings of many researchers on the relationship between trust and microinsurance demand. Bhat and Jain (2006) and **Akotey et al. (2011)** also found trust to be significant and positively associated with health insurance purchase. For instance, if low-income earners trust that insurers will honor their contractual responsibilities by making timely payments of claims when necessary, then they will have the confidence to take up micro-insurance cover.

## **CHAPTER FIVE: CONCLUSION AND RECOMMENDETION**

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### **5.1 Introduction**

This chapter provides conclusions of the findings, recommendations and areas for further research on the factors influencing penetration of microinsurance in Ethiopia insurance companies. Low microinsurance penetration in Ethiopian insurance industry is the reason to conduct this research project. Therefore this study was conducted to find out if Clients awareness, Level of income, Price, Government regulation and Trust lead to low microinsurance penetration. Coefficient of determination explains the extent to which changes in the dependent variable is explained by changes in the independent variables. The dependent variable (Microinsurance Penetration) is explained by independent variable (Awareness, level of income, price, government regulation and trust).

### **5.2 Conclusions**

The aim of this paper is to determine the factors influencing penetration of microinsurance in Ethiopia. Using 5 point Likert scale self administered questioners collected from 110 executive management of five insurance company providing microinsurance and nine years data from the same companies, as well as using the multiple Linear regression model to analyze the econometric framework, the study identified that microinsurance penetration in Ethiopia is affected by clients lack of awareness of microinsurance products. The study also identified that level of income is another indispensable factor that influence penetration of microinsurance in Ethiopia. Other important factor that affects penetration of microinsurance is identified as price of the products which proved statistically significant. It is also identified that trust on the institution that claims will be paid by the insurance companies in the aftermath of loss when due is the other factor that is identified as influencing microinsurance penetration in Ethiopia. During survey some factors which possibly affect microinsurance penetration other than what is statistically proved above and cited by respondents which in fact need further investigations are high financial literacy, poor technology infrastructure, low new product development, and limited distribution channels are some other possible factors identified to affect microinsurance penetration.

### **5.3 Recommendation for policy direction**

Micro insurance is an effective financial risk management instrument that can empower the low income people to reduce the double disadvantages of vulnerability to risk and poverty. Thus, the factors that hinder the penetration of microinsurance in Ethiopia must be taken into consideration by all the stakeholders in the insurance industry as well as the government in their product development, policy formulations and implementation.

The awareness of microinsurance in Ethiopia can be increased significantly if the high unexploited market in the low income people is targeted and developed. Insurance companies can increase their market shares, if they make intensive campaign in creating awareness of what the risk pooling concept is, What the insurance terms and product is, and the benefit of microinsurance to low income people using trained sales agents, by educating people at the public gatherings or meeting at all levels of kebeles ,woredas& other meetings and using medias like FM radios which is cost effective and can easily address their target groups .

Furthermore, since the price of microinsurance product was statistically found significant the insurance companies has to revise their price (premium) of microinsurance products by taking in to consideration the level of income of their potential customer and in the way that doesn't compromise the ability of clients to pay for essential items such as food and shelter to attract more customer to the pool and benefit from large number.

Additionally, insurers must work hard to create a positive public perception about their institution and operations. This can be done through the proper explanation of the benefits of micro-insurance products, the legal obligations of the parties involved in the insurance contractual relationship and a clear explanation of when a policyholder can make a claim and the procedure for making such claims. Such initiative will improve the trust and perception of the low income people about insurers and this would eventually affect positively on the micro insurance penetration.

The Government of Ethiopia can achieve the aims of its poverty reduction strategy if micro insurance is integrated into the GTP (Growth and Transformation plan) the country plan to become a middle income country in 2025. Sometimes poverty reduction initiatives encounter major setbacks when the target groups and individuals suffer from drought due to change in

climate, flood due to excessive rain, fire outbreaks and property damage or the death of the breadwinner in the family. These risks push the low-income households who may otherwise be above the poverty line further below the poverty line thereby eroding any meaningful gains made by the poverty reduction program. It is, therefore, crucial for the government to make micro insurance a central pillar in its poverty reduction program, by providing a well targeted and packaged educational program about micro insurance awareness creation to the low income people.

The National bank of Ethiopia, the governing organ, should also consider appropriate legislation that will encourage insurance companies to venture into the micro-insurance business and even put coercive law that enforce all insurance companies providing general insurance to engage them self to sell microinsurance products taking in to consideration the benefit it has to the country in meeting the grand national strategy in poverty reduction within the planned time. On top of this, government should introduce incentives like providing tax exemptions on microinsurance transaction and subsidize microinsurance premium in collaboration with donors until the poor are well aware of the benefit of insurance and until the low income people come to afforded the premium.

#### **5.4 Recommendation for further Research**

The above conclusion is made on few variables assumed to influence penetration of microinsurance in Ethiopia from the perspective of supply side. Therefore, the researcher recommends further research to be conducted from the demand perspective and also by including other variables in the model which is cited during survey such as High financial literacy, poor technology infrastructure, low new product innovativeness and limited distribution channels. This will ensure comprehensive and representative findings obtained on factors that hinder penetration of microinsurance.

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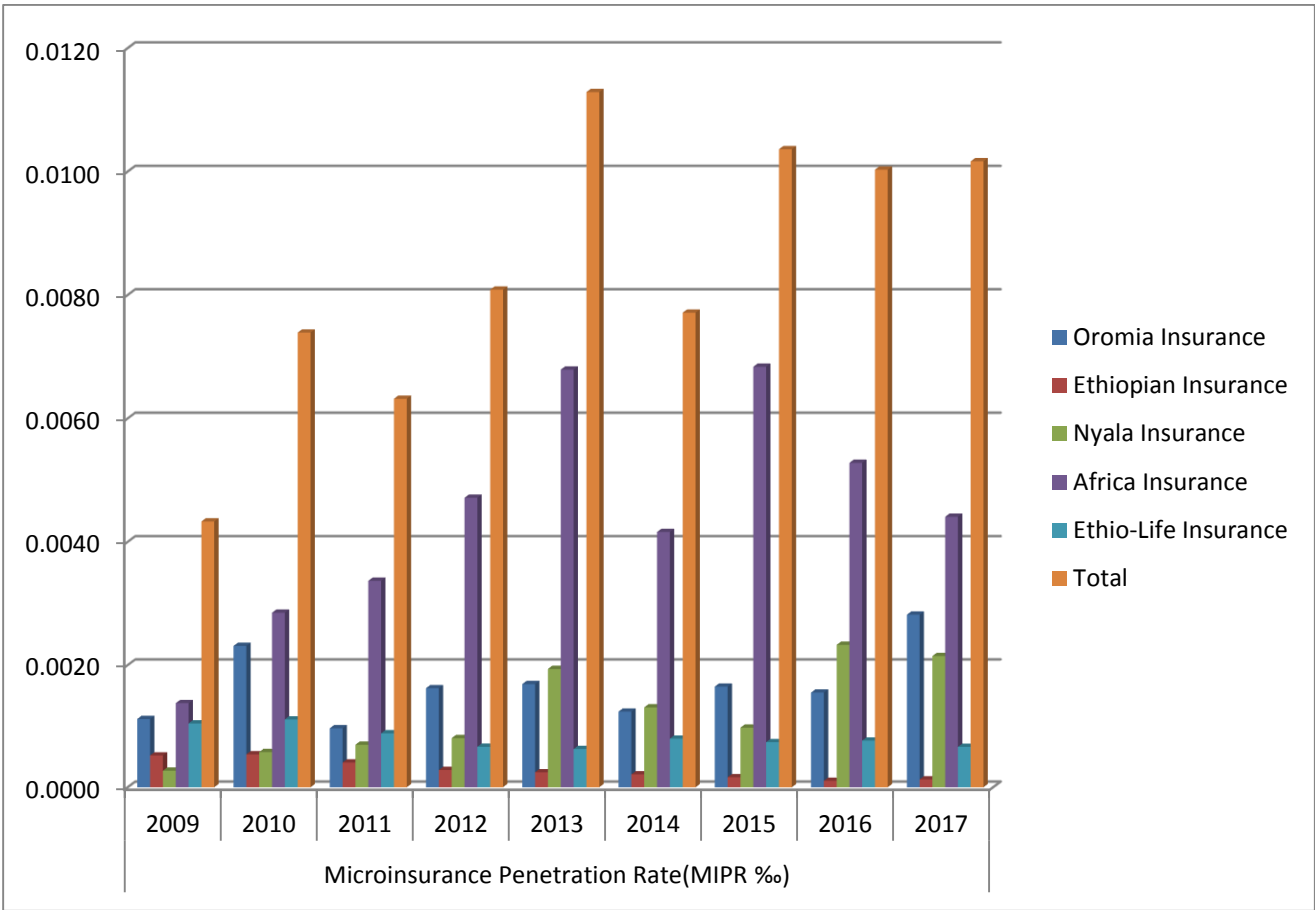
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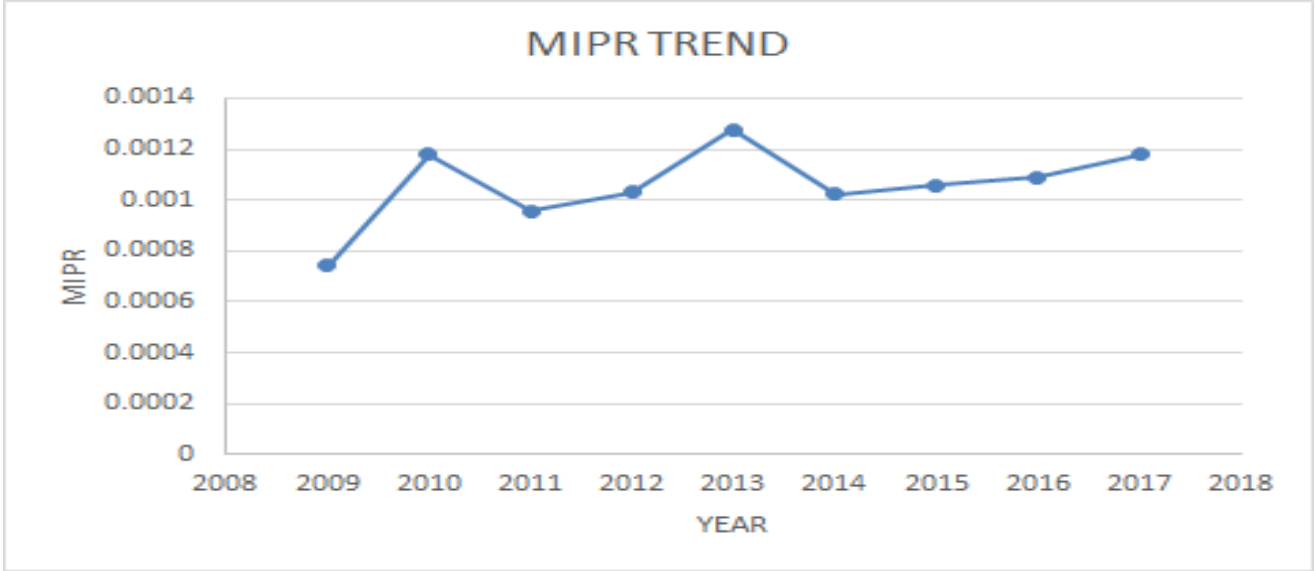
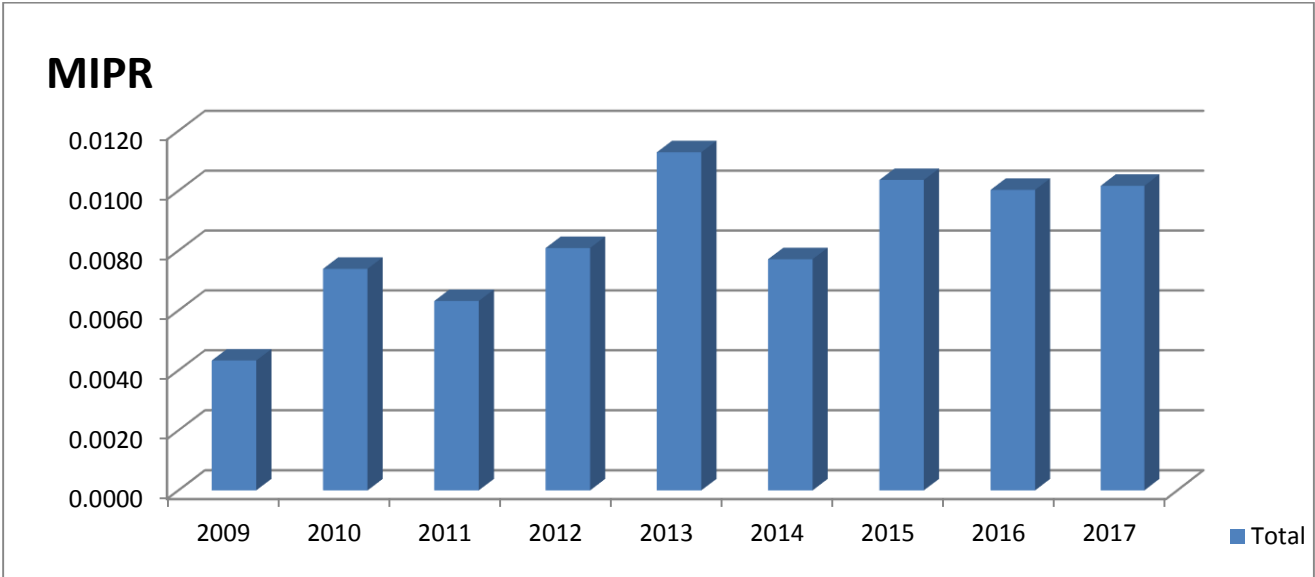
# Appendices

## Appendix I: Microinsurance penetration Rate (MIPR) by Year and Insurance companies



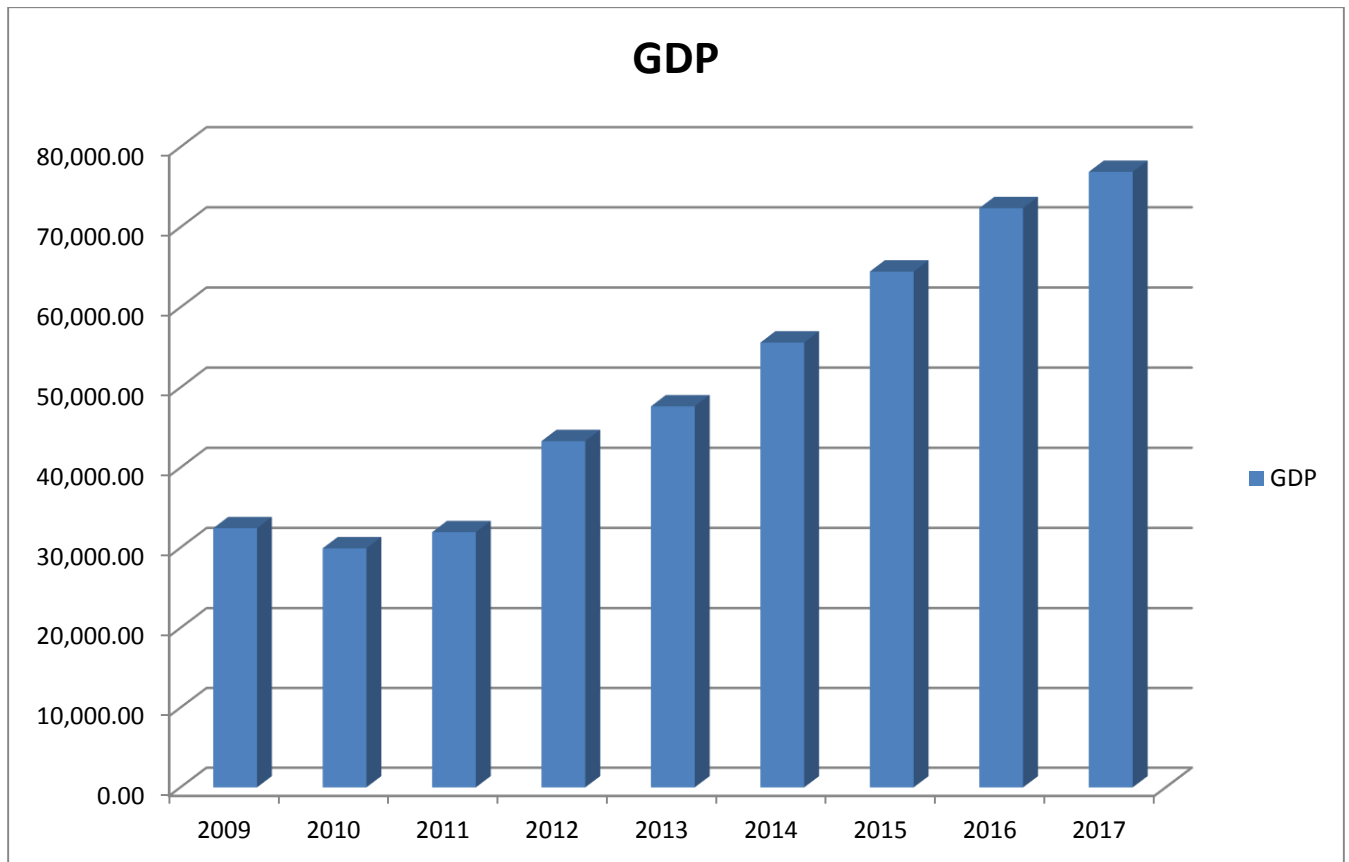
Source: Insurance Companies

**Appendix II: Microinsurance penetration Rate (MIPR) by Year for Insurance Industry**



Source: Insurance Companies

### Appendix III: Ethiopian GDP by Years

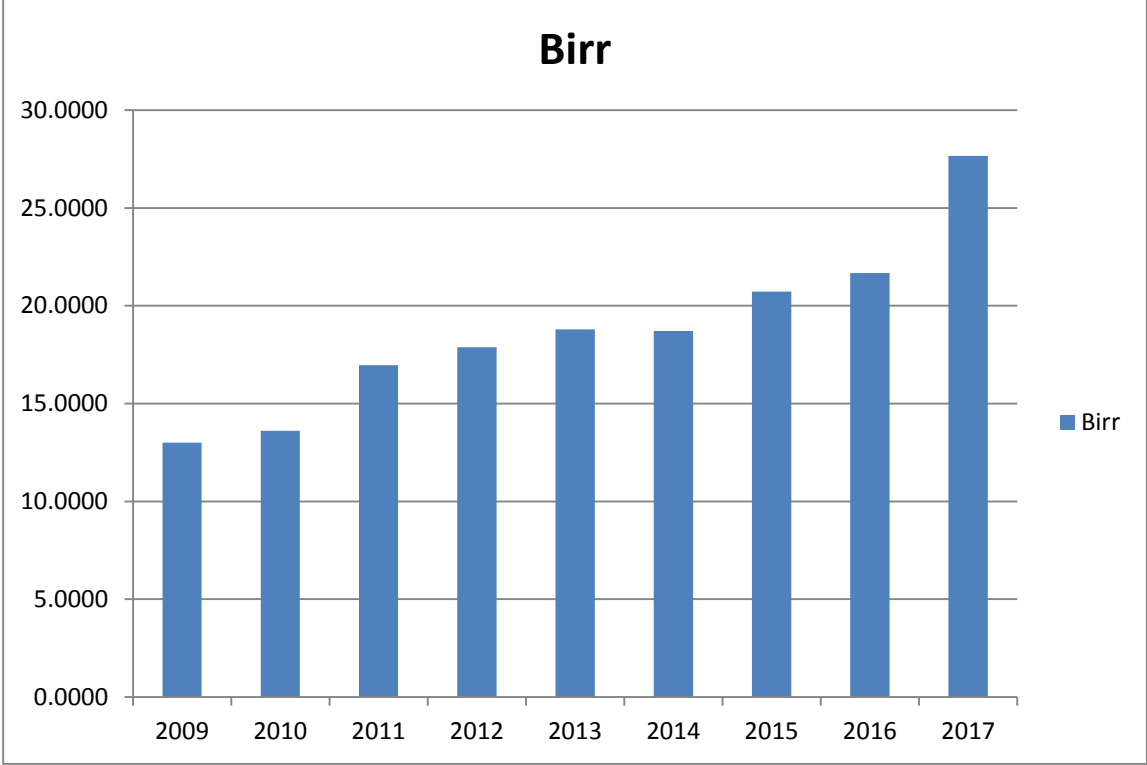


Source: [TRADINGECONOMICS.COM](http://TRADINGECONOMICS.COM)/WORLD BANK

2017\* Data is an estimate

Figures in USD and In (000,000)

**Appendix IV: 1USD in Ethiopian Birr by years**



**Source: National Bank of Ethiopia**

**Appendix V: Questioner cover letter questions**

**Addis Ababa University  
College of Business and Economics  
Department of Management  
Executive Masters of Business Administration (EMBA) program**

**Questionnaires to be filled by Executive Managers (Branch Managers and above)**

Dear respondents,

This study is conducted for the partial fulfillment of the requirements for Addis Ababa University graduate program in Executive Master's of Business Administration. The objective of the study is to identify "*Factors Influencing Penetration of Microinsurance in Ethiopia.*" In this regard your patience in answering all the questions, your genuine and well thought response will greatly contribute to achieve the objectives of the study. Any information provided will only be used for academic purpose and it will be kept confidential with utmost anonymity. Please also remember there is no right or wrong answer and only your honest opinions are important.

**Instructions**

- Do not write your name.
- Please provide your answer for the questions by putting a (√) mark or circle the letters within the box.

Thank you in advance for giving me your valuable idea and time through responding the questionnaire.

Abdi Bulti Tel: +251-911-19 66 76

## 1. General Information

1. Company where you work?	A. Oromia Insurance Company S.C B. Ethiopian Insurance Corporation C. Nyala Insurance Company S.C D. Africa Insurance Company S.C E. Ethio-Life & general Insurance S.C
2. What is your position in the company?	F. Chief Executive Officer B. Executive Officer C. Department manager D. Division Manager E. Branch manager
3. What is your educational background? (Please circle)	A. Certificate B. Diploma C. Bachelor Degree D. Postgraduate E. PHD
4. How many years have you been working in Insurance?	A. Less than 5 years B. 5 to 10 years C. 11 to 15 years D. 16 to 20 years E. More than 20 years

Please provide your answer for the following questions

Please indicate your agreement level by putting a (√) mark within the box whether **Clients awareness, level of income, Price of the product, government regulation and Trust** has affected microinsurance penetration in Ethiopia.

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

	1	2	3	4	5
<b>A. Clients awareness</b>					
➤ Low income households have limited understanding of the risk pooling concept.					
➤ Low income households have limited knowledge of the insurance terms and product.					
➤ Low income households see insurance as the reserve for the rich; too expensive and unaffordable for the poor.					
➤ Microinsurance customers feel that paying premium is a form of saving and expect to receive their premium back if claim is not made within the coverage period.					
➤ I believe increasing awareness and knowledge of microinsurance customer will increase uptake of microinsurance products.					

<b>B. Income</b>					
➤ Low income households can afford to pay insurance premium after covering their basic necessities.					
➤ Financial literacy rather than income level has contributed to low uptake of microinsurance products.					
➤ Low income households have liquidity constraints: not because the poor have no money rather they have insufficient funds at the time of enrolment.					
<b>C. Price of the product(Premium)</b>					
➤ The premium set for microinsurance product is fair and affordable for low income households.					
➤ Premium has been carefully priced and do not compromise the ability of clients to pay for essential items such as food and shelter.					
➤ Low income households buy microinsurance products when highly subsidized by government or donors.					
➤ Most customer do not renew their policy when expired, if premium subside is halted.					
➤ I believe offering discount of 50-75% of the existing premium can significantly increase uptake.					
➤ I believe that providing microinsurance for free can help cover our target population to the maximum.					
➤ I believe that in addition to insurance premium there are high transaction costs for the customers (for instance coming from far distance to pay premium and collect claim payment and other related costs).					
<b>D. Regulation</b>					
➤ The insurance industry in Ethiopia has a regulatory framework that is designed to ensure the stability of the microinsurance system and to protect the interest of policyholders.					
➤ The supply of commercial microinsurance to low-income households seems to be constrained by an overly restrictive regulatory environment.					
➤ I believe that Government microinsurance regulation in use is flexible and have no effect on its penetration					

