



**St. Mary's** ቅድስት ማርያም  
University የኢትዮጵያ  
committed to excellence

**St MARY'S UNIVERSITY**

**INSTITUTE OF AGRICULTURE AND DEVELOPMENT STUDIES**

**ANALYSIS OF FACTORS INFLUENCING INDIVIDUAL'S  
WILLINGNESS TO PAY FOR THE COMPULSORY SOCIAL HEALTH  
INSURANCE SCHEME: THE CASE OF GOVERNEMENT SCHOOL  
TEACHERS IN KOLFE KERANIYO SUBCITY**

**BY**

**YORDANOS TENAW**

**JUNE 2017**

**ADDIS ABABA**

**St. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**  
**INSTITUTE OF AGRICULTURE AND DEVELOPMENT STUDIES**

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF St. MARY'S  
UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTER OF ARTS IN DEVELOPMENT ECONOMICS

**BY**

**YORDANOS TENAW TEREFE**

**ADVISOR**

**WONDIMAGEGN CHEKOL (PhD)**

**JUNE 2017**

**ADDIS ABABA**

**St. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**  
**INSTITUTE OF AGRICULTURE AND DEVELOPMENT STUDIES**

**APPROVAL OF BOARD OF EXAMINERS**

As a member of the Board of Examiners of the Master Thesis open defense examination, we testify that we have read and evaluated the thesis prepared by Yordanos Tenaw and examined the candidate. We recommended that this thesis be accepted as fulfilling the thesis requirements for the degree of Master of Arts in Development Economics.

Chair Man (Institute Dean)

Signature

.....

.....

Advisor

.....

.....

External Examiner

.....

.....

Internal Examiner

.....

.....

## **Declaration**

I declared that this thesis, *“Analysis of Factors Influencing Individual’s Willingness to pay for the compulsory contributions of the Ethiopian Health Insurance scheme: With a focus among the government elementary and Secondary School teachers in Addis Ababa”* is my own work, prepared under the guidance of my advisor Dr. Wondimagegn Chekol. I gave the appropriate acknowledgment for the sources I used in the paper.

Yordanos Tenaw Terefe

## Endorsement

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor

Signature

Dr. Wondimagegn Chekol

\_\_\_\_\_

St. Mary's University, Addis Ababa

June 2017

## **ACKNOWLEDGMENT**

This MA thesis writing wouldn't come into reality without full assistance from the thesis advisors Dr Anadualem and Dr Wondimagegn Chekol and my family. My coursework studies at the St Mary's university in the graduate program of development economics program thrust me to pitch into my thesis topic title Social health Insurance, which I believe that healthcare financing is the bottom line for development and economic growth for people of one country. My thanks are also extended to my mother W/o Emebet Ayane, and my Father Ato Tenaw Terefe who made my study possible. Also I am honored to my sisters Almaz and Tsion Tenaw and my brother Zelalem Tenaw who has always show favor to help and encourage me to complete my study.

Finally I would like to appreciate the St Mary University Faculty and community for their excellent program and full commitment for the quality of education and services they are offering.

## Table of contents

Acknowledgment .....	iii
List of abbreviations and Acronyms .....	vi
List of Tables .....	vii
List of Figures .....	viii
List of Annexes.....	ix
Abstract .....	x
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study .....	1
1.2 Statement of the Problem.....	2
1.3 Research Questions .....	3
1.4 Objectives of the Study .....	3
1.4.1 General Objective.....	3
1.4.2 Specific Objectives .....	3
1.5 Significance of the Study .....	3
1.6 Delimitation/Scope of the Study .....	4
1.7 Organization of the thesis.....	4
CHAPTER TWO: LITERATURE REVIEW .....	5
2.1 Theoretical Review .....	5
2.1.1 Interrelationship between Economic development, Environment, Health & population growth .....	5
2.1.2 The short definition of Development .....	5
2.1.3 The parameter of Economic Growth.....	6
2.1.4 Population growth and Economic Development .....	6
2.2 Health care financing in developing countries .....	8
2.3 Theories for Social Health Insurance system.....	9
2.3.1 Definition of Social Health Insurance.....	10
2.3.2 Major factors and preconditions for SHI.....	10
2.4 Decision making theories in the context of health insurance.....	13

2.4.1 Consumer Theory .....	13
2.4.2 Under expected utility (EU) theory .....	14
2.4.3 State-dependent utility theory.....	14
2.4.4 The decision to insure prospect theory.....	14
2.4.5 Poverty literature .....	15
2.4.6 Policy implications .....	15
2.5 The Ethiopian Social Health Insurance System .....	16
2.5.1 Ethiopian Social Health Insurance Proclamation No.690 /2010 .....	16
2.5.2 The Establishment of the Ethiopian Social Health Insurance Agency .....	19
2.6 Empirical Review .....	20
<b>CHAPTER THREE: RESEARCH METHDOLOGY .....</b>	<b>23</b>
3.1 Description of study area .....	23
3.2 Research Design.....	23
3.3 Population and Sampling Techniques.....	23
3.4 Types of Data and Tools/Instruments of Data Collection.....	25
3.5 Procedures of Data Collection.....	25
3.6 Methods of Data analysis.....	25
<b>CHAPTER FOUR: RESULTS AND DISCUSSION.....</b>	<b>27</b>
4.1 Results and findings of the study.....	27
4.1.1. Descriptive statistic based on frequency.....	27
4.2 Analysis and Data presentation.....	32
4.2.1 Inferential statistical analysis.....	36
4.2.2 Logistic regression analysis.....	37
<b>CHAPTER FIVE: CONCLUSION AND RECOMENDATION.....</b>	<b>41</b>
5.1 Conclusion.....	41
5.2Recommendation.....	42
References.....	43
Appendices.....	45



## **List of Abbreviations/Acronyms**

1. SHI: Social Health Insurance
2. OOP: Out-Of-Pocket
3. GNI: Gross National Income
4. GDP: Gross Domestic Product
5. WTP: Willingness To Pay
6. HSTP: Health Sector Transformation Plan
7. EFY: Ethiopian fiscal Year
8. FMOH: Federal Ministry of Health
9. EHIA: Ethiopian Health Insurance Agency
10. AfDB: African Development Bank
11. UNDP: United Development Program
12. GTP: Growth Transformation Plan
13. CBHI: Community Based Health Insurance
14. NHA: National Health Account.
15. ETB: Ethiopian Birr
16. HCFR: Health Care Financing Reforms.
17. EHIA: Ethiopian Health Insurance Agency
18. NEA: National Education Association

## **List of Tables**

Table 2.1: Economic development, Environment, Health and population growth Interrelationship.....	7
Table 4.1 Background/general Characteristics of Individual's.....	28
Table 4.2 Levels of Awareness about SHI.....	29
Table 4.3 Out of pocket Experience.....	30
Table 4.4 Willingness to pay the compulsory contribution of SHI.....	30
Table 4.5 Cross tab- WTP Versus Independent variables.....	32
Table 4.6 Chi-square test.....	37
Table 4.7 Hosmer and Lemeshow Test.....	38
Table 4.8 Model summary.....	38
Table 4.9 Classification table.....	38
Table 4.10 Logistic regression showing the significance between variables.....	39

## **List of Figures**

Figure 4.1 Reasons of the respondents not Willingness to Pay.....	31
Figure 4.2 Aging versus Willingness to Pay.....	33
Figure 4.3 Income versus Willingness to Pay.....	34
Figure 4.4 Awareness versus Willingness to Pay.....	35
Figure 4.5 Value of SHI versus Willingness to Pay.....	36

## **List of Annexes**

Annex 1. Questionnaire (Amharic and English Version)

Annex 2: Federal Negarit Gazeta of the federal democratic republic of Ethiopia: The Ethiopian Health Insurance Agency Establishment, Regulation No. 191/210, and SHI Proclamation No.690/2010

Annex 3: Teachers population statistics from Kolfe Keraniyo Sub City Educational Bureau

## ABSTRACT

Improvements in health closely follow improvements in education as a contributing factor to development and economic growth. Better health in the population will enable workers to put forward greater effort and maintain their efficiency for longer periods. In order to keep citizens healthy and good workforces, many countries in the world have health care financing through social health compulsory and voluntary health insurance systems. But, people must be motivated and have the incentive to accept and pay for Social Health Insurance (SHI) even in compulsory systems.

This study analyzed the factors influencing formal sector workers' willingness to pay (WTP) for the Ethiopian compulsory Social Health Insurance (SHI) scheme (3% payroll), among Addis Ababa government Elementary and Secondary School teachers. Data were collected from 294 respondents using the multi-stage sampling procedures. Data were analyzed with descriptive statistics and Logistic Regression. General results showed that majority of the respondents, 65 percent were not willing to pay the 3% payroll of the SHI scheme set by the government.

Factors like, age, sex, income, awareness and experiences of individuals' out of pocket expense during sudden sickness have been analyzed with the dependent variables willingness to pay the compulsory contribution of the SHI scheme. The Logistic regression results showed that respondents with age group 20-30 are more likely willingness to pay as compared to age group 30-40,40-50 and above. Respondents with salary 3000-5000 are less likely to pay as compared those with salary 5000-8000. Those who have information about SHI are less likely to be willing to pay as a compared to those who have no information about SHI and those who said SHI has value were more likely to be willing to pay as compared to those who never said about SHI has value.

To the questions why respondents were not willingness to pay, the following reasons were suggested and these include: low income/salary, preferred that government subsidize all civil servants, and claimed that they do not have trust on the management and service delivered from health facilities. Also this study showed significant number of females were willing to pay compared to males.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background

Health is recognized to be an essential element of human welfare and sustained economic and social development. Health, like education, is a form of human capital and is a fundamental requirement for economic development.

Improvements in health closely follow improvements in education as a contributing factor to economic growth. Better health in the population will enable workers to put forward greater effort and maintain their efficiency for longer periods. Jones (2013)

There is a mutual relationship and connection between Economic development, environment, health, and population growth. When economic growth increases, the survival resources in the environment of the population, in effect there will be improvement of the health status of infants, mothers, workers, and the aged which in turn will have a positive effect on economic development (Milio, 1983)

In order to keep citizens healthy and good workforces, many countries in the world have health care financing through insurance system. Likewise by the Proclamation No. 690/2010 Ethiopia established a Social Health Insurance (SHI) scheme based on the 3% salary contribution from the formal sector workers. But the public share of total health expenditures changes with income category, awareness level of the scheme, age, sex and in general willingness to pay.

It has been stated that, rapid economic growth of a country is a precondition and has a positive effect on SHI enrollment. Economic growth can lift people out of poverty, meaning that more people can afford to pay their premiums to SHI, can bring more workers into the formal sector, which increases the number of people in the contributory regime; can raise the government's general revenues, meaning that the government can subsidize more of the poor; and tends to increase the government's administrative capacity to collect taxes and insurance premiums. (Milio, 1983)

In this respect one can look into the Ethiopian economic growth and level of income. World Bank (2003) reported that countries are categorized as low-income when their Gross National Income/GNI/ is less than \$766. As indicated by the International Bank for reconstruction and

development (World Bank) Ethiopian Gross National Income (GNI) is \$590, which will put Ethiopia in the category of a low- income country.

Ethiopia claimed a double digit growth in 2013/14. But recently its Real GDP Growth shows a consistent decline from 2013/14 to 2016/17 in a row from 10.3 in 2013/14 to 7.7 in 2016/17 and real GDP per-capita decline from 7.7 in 2013/14 to 5.2 in 2016/17, (AfDB, OECD, UNDP 2016).

How could Ethiopia implement the universal health coverage policy with less health expenditure from general revenue and unpredictable revenue from employees in the formal sector?

With low per capita income, challenging growth prospects, limited and the highest disease burden in the region, Ethiopia faces difficult health financing decisions.

The preconditions in decision making are equally important for people of the country to come to decision and show willingness to be insured or remain uninsured. Preconditions like incentive for people to pay the premiums and economic growth are the main thrust to bring up the attention of the people to enroll in the scheme or policy set. People must be motivated to accept the scheme and pay for Social Health Insurance system, even in compulsory systems.

The general purpose of this study is therefore; to look into whether there is a greater willingness on the part of individuals to be taxed for the payroll contributions or not.

## **1.2 Statement of the Problem:**

By the Proclamation No. 690/2010 Ethiopian established a Social Health Insurance (SHI) scheme based on the 3% salary contribution from the formal sector workers. To this end, the Ethiopian Social Health Insurance scheme was assumed to start its operation in Ethiopian Fiscal Year (EFY) 2008 (2015/16). It was also assumed that SHI would cover the whole country and the strategy was expected to cover the entire formal sector, about 7.77% of the population (6.36million) in three years. The total projected contributions (based on the 3% salary contribution) of SHI in the next 5 years is estimated to be 409 million USD. (FMOH, HSTP, 2016)

Nevertheless, on January 11, 2016 a memorandum from the Prime minister office was circulated to all formal sectors to undertake discussion about the SHI scheme. But, the discussion did not take place as planned, and no feedback has been received from the formal sectors. Meanwhile

it was rumored that the government has extended the discussion of SHI for unlimited period of time.

The purpose of this research is therefore, to analyze factors that could influence individual's willingness to pay for the compulsory SHI scheme. This study is an original work, and the findings of the research would help policy makers to look into the people's decisions and factors influencing their decisions about the SHI system of Ethiopia in the formal sector.

### **1.3. Research questions**

1. Are individuals' willing to contribute for the SHI scheme?
2. Does the levels of awareness/knowledge of individuals about Ethiopian Social Health Insurance (SHI) scheme matter on willingness to pay?
3. What are out-of-pocket expense experiences of individuals' on their sickness treatment?

### **1.4. Objective of the study:**

#### **1.4.1. General Objective**

The main objective of this study is to analyze factors that influence individuals' willingness to pay for the compulsory Social Health Insurance (SHI) scheme among elementary and high school teachers in Addis Ababa.

#### **1.4.2. Specific objectives:**

- To examine individuals' willingness to pay the compulsory contribution for Social Health Insurance scheme
- To determine awareness level of individuals' about Social Health Insurance
- To analyze whether individuals' experiences out- of- pocket expenses during sickness treatments will influence their willingness to pay

### **1.5 . Significance of the Study**

This study focuses on identifying factors that influence individual's willingness and decisions to pay for the proposed SHI scheme. This study would help to know people's decision to insure or remain uninsured and combining empirical evidence with theories may serve to develop good healthcare financing policies. This study, therefore, would be important for the Ethiopian health



insurance agency policy makers to set a viable SHI scheme for the people working in the formal sectors.

### **1.6 . Delimitation/Scope of the Study**

This study was focused only on factors that may influence people's decision to be insured or remain uninsured on the SHI system. The impact of health insurance and access to health services is not treated in this study. Other researchers may continue to study the impact of health services and management on SHI system. In this study factors that affect insurance demand are identified and health policy implications derived. But the impact of health insurance on equity in access to health services and other aspects of the household economy are also relevant. However, it is beyond the scope of this paper to address this issue.

### **1.7 Organization of the thesis**

This paper is organized in five Chapters. Chapter one (Introduction to the Study) introduces the research idea and establishes the reason to conduct the research. Chapter two (Literature Review) discusses both relevant theoretical and empirical literature and exposes the gap in previous research. Chapter three (Research Methodology) presents on data, data collection, and data analysis techniques applied in the research. Chapter four (Result and Discussion) discusses major finding of the study and presents detail interpretation and analysis of the findings. And finally, Chapter five (Conclusion and Recommendation) summarizes the findings of the study, concludes the results, and forwards recommendations.

## **CHAPTER TWO LITERATURE REVIEW**

This Chapter treats the theoretical frameworks of Healthcare financing in general and health insurance system in particular. It is categorized into three parts. The first part deals with relation between health, development and economic growth. This is considered as the bottom line for ensuring the implementation of either compulsory or voluntary health insurance system in a country. Implementation and sustainability of SHI in a developing country with low-income countries is also a subject of this text. The second deals what the Social Health Insurance means and the factors or preconditions for SHI, and the third part is theoretical part that deals with people's decision to pay the premium and make SHI sustainable. The last part treats Health care Financing of the Ethiopian and Health Sector Transformation Plan/HSTP/ for the coming five years (2015-2019) policy in general and projections from SHI schemes contribution in particular.

### **2.1. Theoretical Review**

#### **2.1.1. Interrelationship between Economic development, Environment, Health and population growth:**

Understanding relationship between the economic it is important to know the definition of development and its parameters development and health will be important to understand better the concept of healthcare financing and health insurances systems.

#### **2.1.2. The short definition of Development.**

First, it is very important to know the working definition and parameter of development. Jones (2013) says, a short and popular definition of development is "economic growth plus social change. But Development itself is change and what distinguish it from other changes are the following characteristics: (i) Growth in production of goods and services within a community, (ii) Growth in consumption of goods and services in general within the community, and (iii) Other changes, largely which partly the causes and partly the results are of (i) and (ii).The most basic of the three characteristics is the growth in the production of goods and services within the community. We can only say that there has been economic growth when the total increase in production is such that there is an increase in per capita production too.

On the other hand, increased production may take place in the community, but if the benefits resulting from it pass only into a few hands, there may be no improvement in the standard of living of the inhabitants. Hence development also implies that the increased production is distributed so that a portion of it at least goes to increase the per capita consumption of the general population and generally to improve living standards.

The social change we include under this consideration will involve changes in the pattern of organization of the community itself, changes in interpersonal and other relationships, changes in values and in the culture generally. The subject of development it is important to recognize the paramount importance of one factor that is, economic growth. Unless economic growth takes place, there can be no development in the sense of an improvement in the standard of living of the citizen's individual and the quality of life of the community in general. It is therefore important for us to dwell a little longer on the topic of economic growth and the parameters which determine it, for obviously this is a most crucial area to determine the links between development, and health. What are the factors for economic growth is also a concern we should know about. In the following paragraphs and sub topics.

### **2.1.3 The parameter of Economic Growth**

The traditional factor of economic growth is of course, capital accumulation and investment. Perhaps the next most important factor contributing to economic growth is education. Improvement in education will produce a more competent and efficient labor force. Nevertheless, improvements in health closely follow improvements in education as a contributing factor to economic growth. Better health in the population will enable workers to put forward greater effort and maintain their efficiency for longer periods. Jones (2013)

### **2.1.4 Population growth and economic development:**

Growing population can act as a deterrent of economic development. Through sheer numbers they make survival problems more difficult, to solve and theoretically allow fewer social and economic resources per person. Since rapidly growing population also means more dependants, especially young children, this further adds to the economic burden of the country. Further under these conditions, workers are usually less healthy and therefore less efficient and consistent in production and which is another liability for economic growth. Conversely when economic growth increases, the survival resources in the environment of population, in effect improving

the health issues infants, mothers, workers and the aged, the short term effect is to have more resources available per person, more effective worker, and in the long term, a slowly dropping birth rate.

**Table 1: Economic development, Environment, Health and population growth Interrelationships**

<b>Economic Development</b>		<b>Effects of population growth</b>		
↓				
<p>-Socio economic environment: -Distribution of survival resources:</p> <ul style="list-style-type: none"> <li>• Adequate food</li> <li>• Environmental security (safe water, non-infection surroundings)</li> </ul>	<p>→</p> <p><b>Effects on health</b></p> <ul style="list-style-type: none"> <li>↑ Infant Health</li> <li>↓ Infant deaths</li> <li>↓ Death rates</li> <li>↑ Females health</li> <li>↑ Worker health</li> </ul>	<p><b>Fertility</b></p> <p>Repr↑duction capacity</p> <p>Risk ↑ pregnancy</p> <p>Older↑people</p>		
<ul style="list-style-type: none"> <li>• Basic education medical and birth control services</li> </ul>		<p>→</p> <p><b>Effects on population growth.....</b></p> <ul style="list-style-type: none"> <li>↑Awareness of Economic advantage of limiting children</li> <li>↑Planned births</li> </ul>	<p><b>Effects on Economic development</b></p> <ul style="list-style-type: none"> <li>↑ workers productivity</li> <li>↓ costs per worker due to sickness</li> </ul> <p><b>Effects on Health</b></p> <ul style="list-style-type: none"> <li>improved maternal health</li> <li>↓ maternal deaths</li> <li>↑ infant health</li> </ul> <p><b>Effects on Economic Development</b></p> <ul style="list-style-type: none"> <li>↑ per capita income</li> <li>↑ per capita service</li> </ul>	

Source: (Nancy Milio, 1973) *Economic development, Environment, Health and population growth Interrelationships.*

## **2.2. Health care financing in developing countries**

This section reviews the enabling conditions for an expansion in health expenditures from efficiency, equity, and sustainability perspectives in the context of low income countries. (World Bank 2005b categorized countries with a Gross National Income/GNI/ of less than \$766) are low-income countries. It examines mechanisms for increasing resources for health and the major restrictions on each method in low-income countries will be discussed.

Poverty magnifies the need for health care while shrinking the capacity to finance it. Low-income countries face 56 percent of the global disease burden but account for only 2 percent of global health spending. With spending levels of some \$30 per capita on average, over half of it out of pocket, low-income countries face severe challenges in providing their citizens with a basic package of essential services and a modicum of financial protection against the impoverishing effects of catastrophic illness. (World Bank 2005; Mathers, Lopez, and Murray, forth coming).

Most low-income countries, particularly those in Africa, are far off track for reaching the Development Goals for health. To improve the equity and efficiency of their health financing systems and to achieve the Development Goals, low-income public sector management; significantly increase their current government health spending levels through enhanced domestic resource mobilization, improvements external assistance; improve financial protection to the extent feasible through appropriate risk pooling mechanisms adapted to country-specific circumstances; and improve the technical and allocate efficiency of government health purchasing decisions. In this respect Low-income countries face difficult choices and trade-offs, and there are no one-size-fits-all solutions.

Every country wants a health care system that offers good health outcomes, affordable services, satisfied consumers and providers, and medical and financial equity. These objectives are hard to attain in low-income countries, where budget constraints are binding at low levels of overall expenditure, in particular in the public sector.

The World Bank (2006) reported that health expenditures are largely out of pocket in low-income countries and there is limited capacity to increase domestic public expenditures, donors are expected to finance most of the scale-up. But even if donors make long term commitments, health expenditures will eventually have to be absorbed within each country's domestic resource.

The International Bank for Reconstruction and Development / The World Bank (2006) advises the following points.

- *“Because economic growth is a precondition for achieving the sustainable Development Goals, low-income countries must not jeopardize overall growth and equity goals as they weigh decisions about additional taxation and resource allocation that could generate additional revenues for health.”*
- *“Payroll-financed social insurance has many of the same limitations as general taxation in low-income countries, and it will be difficult for many countries to meet the enabling conditions that increase the probability of successful implementation of social health insurance schemes and guarantee their sustainability.”*
- *“To effectively increase recurrent health expenditures, donor funding should be in the form of predictable on-budget financing offered over extended periods (20 years or more in some countries). Without long-term commitments of assistance, low-income countries may not be able to handle the recurrent cost related fiscal contingencies generated by such increases.”*
- *“Low-income countries are likely to have a larger and more equitable impact on health outcomes if they select a very basic universal package of mainly public goods, including some treatment services proven effective in moving toward the development goals. Other interventions should be considered in a targeted manner”.*
- *“Low-income countries, in turn, need to improve public expenditure planning, management, and monitoring, particularly by upgrading financial management and procurement systems, improving accountability for results, and strengthening judicial systems.”*

In Sub-Saharan Africa, government expenditures on health are extremely low. For example the Federal Ministry of Health in Ethiopia projected in 2017/18 is 1,042,153,142.860USD. Regarding this Africa faces difficult health financing decisions, with low per capita income, challenging growth prospects, limited domestic revenue mobilization potential, severe shortages of health manpower, and the highest disease burden in the world,. Ethiopia is not exceptional from the rest other African countries.

## **2. 3. Theories for Social Health Insurance system**

### **2.3.1 Definition of Social Health Insurance**

World Bank (2006) reported that SHI has three distinct characteristics. First, Social insurance is compulsory, which is the major feature that distinguishes SHI from voluntary private insurance. Under social insurance, everyone in the contributory regime group must enroll and pay the specified premium or contribution. The contribution is most often specified as a percentage of wages, or, as referred to by the economic literature, a dedicated payroll tax. The second characteristic pertains to eligibility. Citizens only become entitled to receive benefits when they have paid the required premium. The third characteristic is that SHI premiums and benefits are described in a social compact, which is usually set out in the legislation that establishes the economic exchange between the two parties: enrollees and the social insurance plan. Citizens should agree to pay the contribution with some confidence that their contributions will be used fairly and effectively to fund health care for all those who are part of the system.

### **2.3.2 Major factors and preconditions for SHI:**

What preconditions might lead to the successful development of social health insurance systems in developing countries are important to know. Feasibility of social health insurance in developing countries is neither a good nor bad system in itself. In fact, the success of its implementation in a given country depends on the presence of a series of preconditions and governments' abilities to influence the factors.

#### **2.3.2.1 Incentive for people to pay premiums:**

People must be motivated to accept and pay for SHI, even in compulsory systems. People have the incentive to prepay only if they currently have to pay for their health services. If adequate public sector services of good quality are provided free or nearly free, why would people who use these services want to enroll and pay for SHI? People will not want to pay for SHI unless user fees are high, if patients have to purchase drugs and supplies, or if public services are so poor that many patients pay out-of-pocket for private providers.

#### **2.3.2.2. Certification of qualified providers of health services:**

Developing nations have tended to pay little attention to the safety and quality of health services rendered in the private sector. Publicly provided health services are also problematic.

Governments manage public facilities by means of bureaucratic rules that tend not to encompass modern accounting, financial, and clinical information systems. The average clinical quality of public facilities might be better than that of private facilities, but is nevertheless highly variable. These deficiencies have to be remedied before or concurrently with SHI to gain sustained public support, perform its role of assuring a reasonable quality of health care, and sustain its operations financially. Establishing standards system for enforcing them must be high priorities before SHI can be implemented.

#### **2.3.2.3. Rapid economic growth:**

Rapid economic growth is an important consideration in sustaining an SHI program and in expanding it to achieve universal coverage. Nowadays, health care costs rise rapidly because of inflation, rising expectations, and expensive new drugs and technology. Unless wage rates are also rising rapidly, premiums would have to be increased frequently. Meanwhile, governments need rising revenues to subsidize the growth in premiums for the poor and to expand coverage.

*“Moreover, rapid economic growth has positive effects on SHI enrollment in that it (a) can lift people out of poverty, meaning that more people can afford to pay their premiums; (b) can bring more workers into the formal sector, which increases the that the government can subsidize more of the poor; and (d) tends to increase the government’s administrative capacity to collect taxes and insurance premiums. Rapid economic growth will therefore enable a nation to move toward universal coverage. In countries where growth is very slow number of people in the contributory regime; (c) can raise the government’s general revenues, meaning or nonexistent, it might be better to wait, because social health insurance will not be able to mobilize additional resources.”(Schneider 2004)*

#### **2.3.2.4. Size of the informal sector**

Where the informal sector is large, the payroll base for contributions is very narrow, providing limited ability to raise significant resources for health care. In contrast, countries where the formal sector is dominant are able to register workers much more easily. This is particularly true in countries with a high proportion of industrial workers, because most companies in this sector will have a formal payroll system from which contributions can be paid. It is also the case when the state sector is the main employer, although this situation might not be stable in countries where the economy is in transition between a state-run system and a market-led one.



#### **2.3.2.5 Distribution of the population:**

Successful experiences seem to be associated with growing urbanization and increased population density, because these evolutions facilitate the registration of social health insurance members, and the collection of contributions (Ensor 1999; Carrin and James 2004).

#### **2.3.2.6. Margin to increase labor costs:**

It is necessary to assess the extent to which increased wages due to payroll contributions affect the competitiveness of a given economy. In some cases, they may represent an excessive burden and negatively affect growth and employment. They may also harm the labor market by increasing tax evasion and reducing the size of the formal sector. Furthermore, in many countries, salaries are already a major source of taxation (income tax, unemployment insurance contributions), and this burden limits the potential to impose significant new payroll taxes (Normand and Weber 1994).

#### **2.3.2.7. Good-quality health care infrastructure:**

The quality of the health services available to the insured population is critical to the success of social health insurance systems. Social health insurance gives the insured population a right to access these services. Yet the successful implementation of a social health insurance scheme depends on the effective availability of services. The best-designed social health insurance system remains an empty shell if a country does not have the infrastructure to provide the health services included in the benefits package. In turn, the existence of good-quality infrastructure will encourage the population to join the system and support it.

#### **2.3.2.8. Existence of a consensus in favor of social health insurance:**

The successful implementation of social health insurance depends to a large extent on the existence of a broad consensus among the main stakeholders to comply with the scheme's rules. Indeed, the society as a whole may place a limit on the degree of equity and ready to accept or fund. For instance, when all contributions are pooled and the benefit package is universal, differences in contributions between groups may turn out to be so large that they are no longer acceptable to many people. If the same benefits are granted to everyone, it may bring an end to the health care privileges of the elite. Consequently, they may resist the implementation of social health insurance. Thus, the acceptability or sustainability of the social health insurance scheme

may be jeopardized, as a significant part of the population may be unwilling to accept this important implicit redistribution.

#### **2.3.2.9. Political stability and political rights:**

The political context of a country also plays a fundamental role in the successful implementation of social health insurance. Indeed, without a high level of political rights, it is doubtful that the government will get the support needed for expanding social health insurance. The government might also lack incentives for improving the living conditions of the population through health care reform. In general the feasibility of the implementation of social health insurance systems depends on a set of country-specific socioeconomic and political factors, principally the rate of economic growth, the extent of the formal sector, the geographic distribution of the population, the extent of urbanization, the possibility of increasing labor costs, the administrative capacity of the system, the quality of the health care infrastructure, the level of solidarity, the support of the main stakeholders, and the stability of the political context.

#### **2.4. Decision-making theories in the context of health insurance**

This section highlights empirical academic theories whether the enrollee or people are willing to take decisions to pay the premium set for health insurance in general. It also reviews economic and social theories on decision-making and relates them to empirical findings on the insurance demand.

Schneider (2004) explains that generally, insurance demand studies use expected utility theory to explain individuals' decision of whether or not to insure. The poverty literature suggests that poor households are expected to become increasingly risk averse if they move closer to or further below the poverty line.

Other economic and social theories may inform analysis of insurance demand, and serve to better understand poor people's decision-making concept in the context of health insurance enrolment. Among them are state-dependent utility, endowment effect, status quo bias, regret and disappointment paradigms, prospect theory, and theories related to trust and social capital. (Schneider,2004).

**2.4.1. Consumer theory:** *Consumer theory* assumes that if consumers are perfectly informed, or have enough knowledge about the scheme, they maximize their utility as a function of

consuming various goods, given relative prices, their income and preferences. Health 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 – such as user fees – 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. Thus; theories on decision-making under uncertainty are generally used to describe insurance enrolment.(Cameron 1988).

**2.4.2. Underexpected 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. At the time of insurance choice, consumers are uncertain whether they will be ill or not, and of the related financial consequences. Insurance reduces this uncertainty. Through insurance, they can level out their income over two different states, ill/not ill, which makes the aggregate outcome relatively certain. This certainty allows the insured to reach a higher utility in case of illness than those without insurance.

**2.4.3. State-dependent utility theory:** suggests that consumers' utility level and tastes are influenced by their state, such as their health or socio-economic status. Accordingly, people may have different degrees of risk aversion, which could influence their insurance decision and the magnitude of their expected insurance pay-off. Most people insure when they are healthy.

A healthy person might optimistically expect to remain healthy in the near future, which has implications on the insurance choice. The resulting insurance coverage may be below full loss coverage, if the anticipated insurance pay-off is below the real loss in case of illness. Hence, the anticipated need for medical care given the current *state*, and the *magnitude of the related insurance pay-off* in case of sickness will affect individuals' insurance demand(Schneider,2004).

**2.4.4. The decision to insure 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 individual health 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.

**2.4.5. Poverty literature:** The poverty literature describes additional concepts that influence decision-making, namely time preferences and poorhouseholds' risk aversion against risky investments. This literature suggests that households are expected to become increasingly risk averse as they move closer to poverty, as any further drop in income can push them below the survival point (World Bank 2004).

**2.4.6. Policy implications:** Numerous factors have been derived that may explain poor households' insurance enrolment decisions. The poverty literature suggests that the poor have liquidity constraints and other behavioral constraints that cause them to remain uninsured even when they might be better off with insurance. They may rely on solidarity from family and friends to smooth out consumption and financial shocks related to ill health over time.

Thus, health policy might focus on addressing these factors by considering first, the insurance design; second, the socioeconomic situation; and third, the informational context. First, combining empirical evidence with decision-making theories may help in designing health insurance that responds to the needs of low-income groups.

Secondly, the few empirical findings with income-independent insurance demand from low-income areas suggest that factors other than households' socio-economic background may motivate the poor to insure (Schneider and Diop 2001).

## **2.5. The Ethiopian Social Health Insurance System**

**2.5.1. Ethiopian Social Health Insurance** “Social Health Insurance Proclamation No.690 /2010” as stipulated in the proclamation the definition and objectives of SHI is stated hereunder.

### **Definitions**

In this Proclamation, unless the context otherwise requires

1/ “employer” mean a public office, a public enterprise or any person that employs at least ten employees;

2/ “employee” means any employee having a three month and above period of service and includes public officials, management staff, judges, prosecutors, members of the police, members of the House of Peoples’ Representatives, salaried members of the House of the Federation and salaried laborunion officials, and may not include members of the Defense Forces;

3/ “pensioner” means any person receiving monthly pension payments from the Social Security Agency and includes survivors of a pensioner;

4/ “health facility” means any health facility that have concluded an agreement with theAgency to provide services for beneficiaries;

5/ “member” means a person registered for the social health insurance scheme and paying contribution to the scheme;

6/ “salary” means the monthly remuneration paid to an employee for the service he renders during regular working hours;

7/ “beneficiary” mean a person entitled to receive the benefit packages under the social health insurance scheme;

8/ “child” means the natural, adopted or stepchild of a member who has not attained the age of 18 years and includes any child who is under the guardianship of the member in accordance with the law;

9/ “spouse” means a person married to a member;

10/ “family” comprise the spouse and children of a member and include mentally or physically impaired children of the member who have attained the age of 18 years but cannot sustain themselves;

11/ “health service package” means health services covered by the social health insurance scheme;

12/ “Agency” means an agency established by regulation to be issued by the Council of Ministers for the implementation of this Proclamation;

13/ “person” mean any natural or juridical person;

14/ any expression in the masculine gender includes the feminine.

### **2.5.1.1. SOCIAL HEALTH INSURANCE SCHEME**

#### **3. Establishment**

A social health insurance scheme is hereby established.

#### **4. Objective**

The objective of the social health insurance scheme shall be to provide quality and sustainable universal health care coverage to the beneficiary through pooling of risks and reducing financial barriers at the point of service delivery.

#### **5. Membership**

1/ Employees and pensioners shall be members of the social health insurance scheme.

2/ Every employer shall get registered all its employees with the Agency for the social health insurance scheme.

3/ The Social Security Agency shall get registered all pensioners with the Agency.

4/ The Agency shall provide guidelines on registration of members.

#### **Sources of Finance**

The social health insurance scheme shall have the following sources of finance:

1/ members’ contributions;

2/ employers’ contributions;

3/ investment income; and

4/ other related sources.

#### **7. Beneficiaries**

1/ Beneficiaries of the social health insurance scheme shall be members and their families.

2/ Any member shall have the obligation to provide accurate information about his family composition and use the service properly.

## **8. Health Service Package**

1/ The health service package to be provided to beneficiaries shall include essential health services and other critical curative services.

2/ The particulars of the health service package referred to in sub-article (1) of this Article shall be determined by regulation taking into consideration the contributions to be collected pursuant to Article 9 of this Proclamation.

## **9. Contributions**

1/ Members and employers shall contribute to the social health insurance. The Government shall also make additional contributions for pensioners.

2/ The amount and payment modality of contributions to be made pursuant to sub-article (1) of this Article shall be determined by regulation to be issued for the implementation of this Proclamation; provided, however, that an employee and employer shall make equal percentage contributions based on the salary of the employee.

3/ Any employer shall withhold the contributions of employees from their monthly salaries and timely transfer the same to the Agency together with its own matching contributions.

4/ The Social Security Agency shall transfer to the Agency the monthly contributions of pensioners together with the matching contributions of the government.

5/ Any pensioner who is re-employed without foregoing his monthly pension allowance shall be considered as an employee for the purpose of this Article.

6/ Any employer shall furnish the Agency with particulars regarding each employee's salary and other related information as may be required by the Agency.

## **PART THREE**

### **2.5.1. 2MISCELLANEOUS PROVISIONS**

#### **10. Power to Issue Regulation**

The Council of Ministers may issue regulations necessary for the implementation of this Proclamation.

## **11. Inapplicable Laws**

1/ No law, regulation, directive or practice shall, in so far as it is inconsistent with this Proclamation, be applicable in respect of matters provided for by this Proclamation.

2/ notwithstanding the provisions of sub article (1) of this Article, this Proclamation shall not affect: Additional medical benefits granted under collective agreements concluded in accordance with the Labor Proclamation No. 377/2003; and b) Additional medical benefits granted by police health institutions to members of the police

### **Effective Date**

This Proclamation shall come into force a year after its publication in the Federal NegaritGazeta, done at Addis Ababa, this 19th day of August, 2010, Girma Woldegeorgis President of the federal democratic republic of Ethiopia.

### **2.5.2. The Establishment of the Ethiopian Social Health Insurance Agency**

Council of Ministers regulation No. 191/2010 Establish the Ethiopian Health Insurance Agency with the following powers and duties. The Agency shall have the powers and duties to:

1. Establish and implement efficient and effective health insurance system;
2. Collect and administer monthly contributions of the social health insurance system;
3. Conclude contracts with and effect payment to accredited health service provide and monitor their performances
4. Receive and investigate suggestions and complaints by members regarding service provision and provide appropriate solutions;
5. Health insurance is being implemented in all institutions required to implement it;
6. Create conducive conditions to expand and strengthen health insurance, encourage and coordinate those engaged in the field.
7. Undertake public education and sensitization on health insurance;
- 8 undertake studies for revision of the benefit package and amount of contributions; present the result with recommendations to the Ministry; implement same when approved by the government
9. Where necessary, establish different committees, guide and coordinate their activities;
10. Make investments pursuant to directives of the government;



11. Take measures to ensure the financial sustainability of the health insurance system;
12. Own property, enter into contracts and sue and be sued in its own name;
13. Delegate part of its powers and duties to institutions as deemed necessary;
14. Performance other activities as may be necessary for the attainment of its objectives

## **2.6 Empirical Review**

### **2.6.1 Health Care Financing in Ethiopia (Health care Transformation Plan (2015-2019):**

In this section the general information of the Ethiopia's Health Sector Transformation (HSTP) financial health care plan and social health insurance contribution projection is highlighted.

The National Health Accounts (NHA) showed that the total spending on health has been growing steadily. In 2010/11, it reached ETB 26.5 billion (US\$ 1.64 billion) from ETB 11.1 billion (US\$1.2 billion) in 2007/08. The fifth round NHA revealed that nominal total health spending on health grew by 138% in 2010/11 compared to the total budget estimated in the fourth round of the NHA in 2007/08. The fifth round of the NHA showed that the per capita health expenditure increased from US\$ 16.10 in 2007/08 to US\$ 21 in 2010/11.

The per capita spending on health grew five-fold from US\$4.07 in 1995/96, largely due to the aggressive efforts to mobilize international funding and implementation of the health care financing reform (HCFR) in the country. The reforms in HCF aim to increase health resources, protect the poor, and introduce equitable financing mechanisms. These reforms are now being implemented in the majority of the regions that have more than 80% of health facility coverage. However, the increment is short of HSDP IV target of increasing the total health budget from 16.1 USD/Capita to 32.2 USD per capita.

According to the NHA-V report (2010/2011), the share of health expenditure out of the country's Gross Domestic Product (GDP) reached 5.2%, which is a significant increment from the 4.5% in 2007/08 (MOFED, 2003 EFY). This is an acceptable level increment since it is above the WHO recommendation of a minimum of 5% of GDP spending on health. However, the share of total public sector health expenditure against the country's total government expenditure remains low; it reached 5.6% in 2010/11 which is a modest increment from its 5% share in 2007/08 (National Bank of Ethiopia, 2011).

According to the health sector reform, improving Retention and Use of Health Care Financing Reforms (HCFR) is one of the key financial mobilization strategies. HSDP IV has set a target of increasing the proportion of public health facilities retaining and using their revenue from 20% to 100%. Since the start of implementation of the HCFR, regions formulated proclamation, regulations, directives, and implementation manuals to align with the national strategy. It is being implemented in 2,241 health facilities (90 hospitals and 2,151 HCs) in seven regions (except Somali and Afar) and two city administrations.

The amount of retained revenue generated by health facilities varies from facility to facility and from region to region. On average health centers generated 30% of their total budget while hospitals generated 23% from retained revenue. Hospitals on average retained ETB 1.56 million per year, while HCs retained ETB 0.37 million. The retained revenue has improved the availability of essential medicines, diagnostic equipment and medical supplies. It is also used for renovation and expansions of rooms and staff housing. Additionally the health facilities were able to cover a significant proportion of their utility bills (HSDP Mid-Term Review, 2005 EFY).

There has been improvement over the last few years in government allocation for fee waivers to facilitate access. Total subsidy for the poor has reached more than 20 million Birr so far. The number of fee waiver beneficiaries has also reached 2 million. While this progress is encouraging, it constitutes less than 10% of the total population that lives below the poverty line in the country. Maternal and child health services (ANC, delivery, PNC and immunization etc) are among the exempted health services (HSDP Mid Term Review, 2005 EFY).

Outsourcing of non-clinical services in public hospitals is another core element of the HCFR to enable health facilities to focus on core business while improving efficiency in the system. Reports indicate that there are an increasing number of health facilities which outsourced non-clinical services to the private sector.

### **2.6.2. Financial Projections for HSTP for five years plan**

The sector has projected the financial availability for the HSTP for all sources of financing. These sources are government budget allocation, community contribution (in kind and cash), health insurance (both community and social health insurances), and external aid from development partners. The assumptions used to project each of the financing sources and projected availability of financing is described in the following sub-sections.

### **2.6.3 SHI Contributory schemes funding**

Communities are investing their time and energy to produce their own health. Their contribution is estimated for two major areas of their involvement. The first is their active involvement in the Health Development Army. The leader of the one-five networks will spend 45 minutes per session and two sessions per week. The second aspect of community contribution is working on environmental management for malaria control initiative. 40% of the adult population is assumed to spend 2 days per week per month, 2 days per month and 1 day per month in high, moderate and low malaria risk areas respectively per year. Their contribution is estimated in terms of resources using a minimum wage, which is considered 10 birr per hour. The total estimate community contribution during the HSTP period is 1.0 billion USD. This community contribution does not include other contributions such as establishing waiting rooms for pregnant mothers, labor cost for constructing health posts, and other which is now planned to be one of the strategic initiatives as domestic financing.

### **2.6.4 Social Health Insurance and Community Based Insurance projections in Ethiopia**

The social health insurance scheme is assumed to start its operation in EFY 2008 (2015/16). It is also assumed that SHI will cover the entire formal sector in the country. The total membership contribution of the SHI is projected based on the 3% salary contribution.

The scaling up of CBHI is taking place and it is assumed that by end of 2020, 80% of the informal sector households of 80% woredas will be enrolled into the CBHI Scheme, of which, 10 percent of them will be considered the very poor and government will subsidize them.

The CBHI contribution is only for paying membership based on the current premium rates. It is also assumed that member contribution of community and social health insurances with a utilization rate of a maximum of 90% and 80% utilization, respectively. The total projected contributions of SHI and CBHI in the next 5 years is estimated to be 409 and 375 million USD respectively, as shown in table below.

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

### **3.1 Description of study area**

The research is conducted in KolfeKeraniyo Sub-city elementary and secondary school teachers. KolfeKeraniyo is one of the 10<sup>th</sup> sub cities of Addis Ababa. Geographically, the district is located in the Western edge of the capital city, Addis Ababa. KolfeKeraniyo sub-city has a total population of 428,654 (Central Statistics Agency report of Ethiopia, 2007). In it there are thirty four government primary and secondary schools. The total population of teachers in these schools is 2668. (Education bureau)

### **3.2. Research Design**

The study employed quantitative method in which survey questionnaires were designed and distributed among respondents. To set an appropriate questions and objectives the necessary secondary sources from the Ethiopian Health Insurance Agency proclamation, legislation and policy from line Ministry, Federal Ministry of Health (FMoH) and the newly established Ethiopian Health Insurance Agency (EHIA) have been consulted. Questionnaires were set in both Amharic and English language so that respondents would not face problem in understanding the nature of questions. All the questions were not open-ended; rather it was prepared in a close ended questions form with optional answers. The overall research design lies in the question what possible factors would influence individuals' willingness to pay the compulsory Ethiopian Social Health Insurance scheme (SHI). This question was addressed to respondents with systematically prepared and categorized survey questionnaires.

### **3.3 Population and Sampling Techniques**

In this research data was collected using the multiple stage and systematic random sampling method. At first stage the capital city of the Federal state of Ethiopia, Addis Ababa, was considered. The capital is structured with ten Sub-cities named as KolfeKeraniyo, Arada, Lideta, Kirkos, Nefas silk-Lafto, Addis Ketema, Gulele, Bole and Yeka.

For the purpose of this study, Kolfe-KeranyoSub-city is purposely selected. This was due to the fact that compared to other sub-cities the KolfeKeranyo is with larger number of population. Secondly the proximity of the sources for the researcher made for data collection and transportation at ease and meets the research schedule in time.

Second technique of sampling employed the number of schools in the sub city. KolfeKeraniyo sub-city has 34 government schools that involve 26 primary and 8 secondary schools. The total population of teachers in these 34 government schools was 2668. (Official documents school bureau office Addis Ababa 2017).

Schools were selected by using stratified random sampling technique from a total of 34 government schools. They were stratified based on primary and secondary schools. After stratification 10 schools were randomly selected from primary school and 4 schools from secondary school. The population from primary school was 1051 and from secondary school were 462. The total population of teachers in these 14 schools was 1513; a study population (N).

The third step involves determining the sample size (n) from the study population. The sample size was determined using the formula set by the Research Division of National Education Association. (NEA Research Bulletin; 1960).The formula is represented as follows and the sample size “n” can be calculated as:

$$\text{Size (n)} = \frac{X^2NP(1-P)}{d^2(N-1)+x^2P(1-P)}$$

Where:  $X^2$ =table value of Chi-Square @ d.f=1 for desired confidence level. In this method a 95% confidence level, was used. Therefore;  $X^2$  at 95% (0.05) confidence level is 3.84,  $P$ =Population proportion (assumed to be 0.5) and  $d$ = degree of accuracy expressed as a proportion (0.05). Therefore, from the total population size ( $N= 1513$ ), the sample size (n) was determined as:

$$\text{Size (n)} = \frac{3.84(1513)(0.5)(1-0.5)}{0.05^2(1513-1)+3.84(0.5)(1-0.5)} = 306$$

The sample size was 306. But in order to compensate the non-response rate the sample size often increased by 5-10 percent. Accordingly adding 5% the sample size 321 participants is projected to respond the questionnaires.

The total sample was proportionally allocated to each of the stratum based on the number of teachers in each stratum. Schools were determined based on population proportional size, and then eligible teachers were selected by simple random sampling techniques (in each school the sample size was divided by the population proportional size of the school which gave a random

starting point of the population) from fresh or current list of teachers in the school. Data was collected on the socio-economic characteristics of the individuals, issues bordering on their health, awareness about SHI and their willingness to pay.

### **3.4 Types of Data and Tools/Instruments of Data Collection**

The source of data was primary which was collected from the responses of teachers on the topic. The survey questionnaire consists of four categories: The first section of the questionnaire was general information that was the background characteristics of the respondent. The second and third sections were about level of awareness of individuals about SHI and out of pocket expenses experiences respectively. The fourth section elicits the individual's decisions or willingness to pay for the set SHI scheme. All category employed close ended questions with two pages to be marked by the respondents. Before distributing the whole questionnaires, pretest has been undertaken and afterwards some revision on questions and options were revised. Therefore, three enumerators were trained and questionnaires were distributed among the respondents.

### **3.5 Procedures of Data Collection**

The questionnaires were simultaneously distributed to all respondents in April 2017. Data distribution took two days and collection took four days and generally all data were completed and collected in six days timeconsecutive days. Questionnaires were prepared both in Amharic and English.

### **3.6 Methods of Data Analysis**

Two methods of analysis were employed in this study. Descriptive Statistics showing all the frequency distribution of the respondents on each categorized questionnaires set and the second method of data analysis was logistic regression that would show the significance between two variables under study.

#### ***Assumption of logistic regression:***

1. Logistic regression does not assume a linear relationship between the dependent and independent variable
2. The dependent variable must be a dichotomy (2 categories).
3. The independent variables need not be interval, nor normally distributed, nor linearly related, nor of equal variance within each group.

4. The categories (groups) must be mutually exclusive and exhaustive; a case can only be in one group and every case must be a member of one of the group.

Because the research point is based on factors that would influence individual's willingness to pay for the compulsory SHI Scheme, Logit regression model was used to analyze the factors influencing individuals' willingness. Logit regression is a nonlinear regression model that forces the output (predicted values) to be either 0 or 1. It is used when dependent variable is binary (also called dummy) which takes values 0 or 1. It estimate the probability of dependent variable to be 1 (Y=1). Logit model is a model for binary response where the response probability is the logit function evaluated at a linear function of the explanatory variables. The model uses cumulative standard logistic distribution which is presented as:

$$WTP = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_{n-1} X_{n-1} + \beta_n X_n$$

*$\alpha$  = intercept and  $\beta$  = coefficient of the independent variables, WTP = Willingness to Pay*

In this model the dependent variable is willingness to pay for SHI and the independent variables are sex, age, educational level, income, awareness about SHI level, OOP expenditure experience. The other categories or variable can be analyzed with simple descriptive analysis.

$$WTP = \alpha + \beta_1 \text{sex} + \beta_2 \text{age} + \beta_3 \text{income} + \beta_4 \text{awariness} + \beta_5 \text{OOP}$$

Data entry was done by CsPro (Census Survey program) version 6.3, and the cleaned data was exported to SPSS for data analysis to generate both descriptive and inferential. Statistical test was used to measure and determine the significance and correlation of variables.

**Chi square** test was used to determine whether the association between two qualitative variables is statistically significant or not. A chi-square statistic is computed comparing the observed frequencies with those expected under the linear model. A non significant chi-square indicates that the data fit the model well. Further to check the model logistic regression was used. It is similar to a linear regression model but is suited to models where the dependent variable is dichotomous. Logistic regression coefficients can be used to estimate odds ratios for each of the independent variables in the model.

## **CHAPTER 4: RESULTS & DISCUSSION**

This chapter treats data presentation and explanation of the results obtained. In the survey there were four categories of questionnaire distributed to the respondents: These include the background of the respondents, question about awareness level about SHI, OOP experiences of respondents. The final section was designed to test the respondent's willingness to pay the compulsory contribution (3% pay roll) from their monthly salary. From the total 317 questionnaires distributed 294 or 93% were found correctly filled and all these were analyzed using the modern computer software programs. The data entry was conducted in a carefully designed CsPro template. From CsPro the data file was then easily transferred to SPSS which made each section's variables to computation and interpretation possible.

### **4.1. Results and Findings of the study**

Two approaches of analysis were discussed in this section. The first is discussing using descriptive statistics. The second one was using inferential statistics analysis (by using logistic regression).

#### **4.1.1. Descriptive statistic based on frequency**

In the first section, background questionnaires consisted of four items, question about, sex, age, salary or monthly income. After the checking data entered in the designed **CsPro** template, all data was transported to compatible SPSS program for analysis. The presentation and discussion of data concentrates on description statistics of the data obtained from the SPSS is shown in Table 4.1.



**Table 4.1. Background/ General Characteristics of Individuals' (n=294)**

<i>Variables</i>		<i>Frequency</i>	<i>Percent</i>
Sex	Male	158	53.7
	Female	136	46.3
Age	20-30	137	46.6
	30-40	74	25.2
	40-50	56	19.0
	50-60	27	9.2
Monthly salary or income	3000-5000	128	43.5
	5000-8000	166	56.5

Source: Own Computation, 2017

The result in above table shows that from the total respondents (n=294) there were more number of males than females 54% and 46 %, respectively. With respect to age, young people with the age of 20-30 were dominant while respondents of 50-60 were less.

#### **4.1. 2 .Level of awareness about SHI**

This section shows whether the respondents have general knowledge about SHI, its benefit or values for healthcare and the main source of information about SHI were asked. The table below illustrates the frequency of respondents who had awareness about the SHI scheme.

**Table 4.2. Level of Awareness about SHI (n=294)**

	<i>Response</i>	<i>Frequency</i>	<i>Percent</i>
Have any information about social health insurance scheme	Yes	235	79.9
	No	59	20.1
Get information	Radio	110	37.4
	Television	76	25.9
	Internet	21	7.1
	Newspaper	5	1.7
	Other	23	7.8
Social Health Insurance scheme has a value	Yes	167	56.8
	No	127	43.2
Reasons to favor Social Health Insurance	SHI has value for keeping healthy life	54	18.4
	Decrease risk of out-of-pocket payment	72	24.5
	Check/visit hospital often	41	13.9

Source: Own Computation, 2017

As can be seen from the table above, about 80% of the respondents have general information about SHI. In relation to this about 57% of the respondents said that Social health insurance had a value or benefits with their reasoning saying that it keeps healthy life (18.4%), it minimizes risks of Out-Of-Pocket experiences (24.5%), in addition they said SHI gives a chance to visit the hospital with no shock of illness.

### **Section 4.1.3: Out-Of-Pocket (OOP) Experience**

This part discusses the **OOP** experiences. Respondents were asked whether the payments for the health facilities were expensive during their sudden sickness. The results are elucidated in the Table 4.3.

**Table 4.3. OOP Experience (n=294)**

<i>OOP Experience</i>	<i>Frequency</i>	<i>Percent</i>
It is very expensive	179	60.9
Expense is medium	65	22.1
It is not expensive	50	17

Source: Own Computation, 2017

As can be seen the majority of the respondents (70%) said that they had experienced very expensive Out-Of-Pocket (OOP) payment. This could be to all health services rendered either from the government or the private health facilities.

#### **4.1.4. Willingness to pay the compulsory contribution of SHI (3% payroll premium)**

In this category respondents were asked whether they were willing to pay the compulsory contribution of the Ethiopian SHI scheme. In addition they were also asked to comment on the options why the decline or unwilling to pay the SHI scheme. The results of the frequency distribution are shown in Table 4.4.

**Table 4.4. Willingness to Pay the Compulsory Contribution of SHI (3% Payroll Premium) (n=294)**

<i>Variables</i>	<i>Response</i>	<i>Frequency</i>	<i>Percent</i>
<b>Willingness to pay the 3% payroll</b>	Yes	103	35
	No	191	65
<b>Reasons not to be willingness to pay</b>	3% payroll rate of payment/premium set/decided is too high	38	19.9
	I believe Government should subsidize all civil servants	101	52.9
	My monthly salary is too low	56	29.3
	Government tax from my income is high	38	19.9
	Had no trust on the service delivered from health facilities	64	33.5

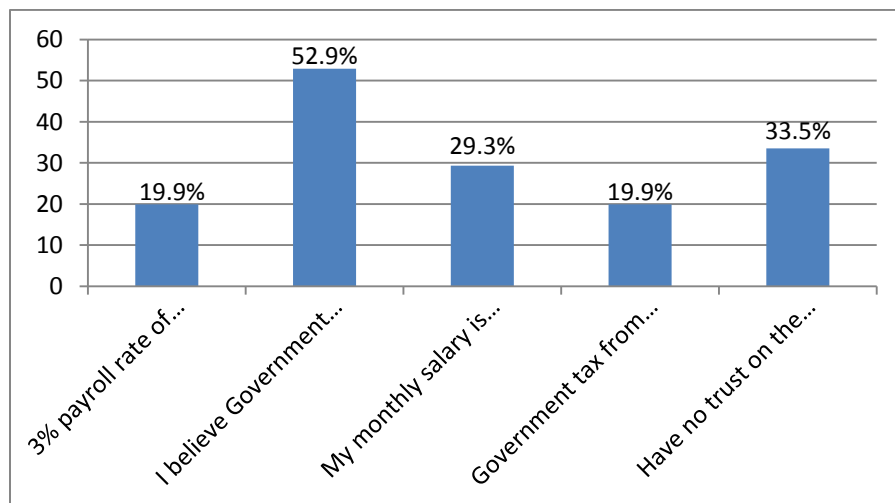
Source: Own Computation, 2017

As shown in the Table 4.4, out of the number of respondents (n=294), 65% of the teachers were not willing to pay the compulsory SHI Scheme premium (3% pay roll), while 35% (103 out of 294) respondents replied that they were willing to pay. Respondents who were not willing to give their reasons were not willing to pay. From the above table respondents who said government should subsidize all civil servants are 52.9%, 33.5% said they don't have trust on the service, and 29.3% said their salary is too low.

The figure is designed to show what couple of reasons could there be from respondents tended them not willing to pay the compulsory contribution of the SHI Scheme? As shown in the graph respondents who gave their views that the government has to cover is greater than the rest options delivered to the respondents.

As indicated in the graph majority of the respondents that about 53% of the respondents suggested that government should subsidize the formal sectors too. And 35 percent said. "I don't have any trust on the management and health facilities" and services available both in the government and private ones

**Figure 4.1. Reasons of the respondents not willing to pay the set premium**



Source: Own Computation, 2017

Literature notes that people with low income level show willingness or take decision to be enrolled to SHI. This shows that though, poor people think SHI a pool risk mechanism, and alleviate the illness shock and expensive out-of-pocket, the people may need participation on the premium set and detailed knowledge about the scheme.

## 4.2. Analysis and Data Presentation

In this section the correlation between the independent variables, Sex, Age, Income, Awareness about SHI and Out -Of -Pocket expense experience are computed with the dependent variable WTP. The table under elucidates each of factors influencing the willingness to pay or to contribute the SHI scheme.

**Table 4.5 Cross tab –WTP Vs Independent variables (Sex, Age, Income, and Awareness about SHI and out -Of -Pocket expense experience)**

<i>Variables</i>		<b>Willingness to pay</b>	
		<b>Yes</b>	<b>No</b>
Sex	Male	49	109
	Female	54	82
Age	20-30	38	99
	30-40	21	53
	40-50	26	30
	50-60	18	9
Income	3000-5000	32	96
	5000-8000	71	95
Have any information about SHI	Yes	93	142
	No	10	49
SHI has value	Yes	89	78
	No	14	113
OOP	Yes, it is very expensive	69	110
	Expense is medium	29	36
	No, it is not expensive	5	45

Source: Own Computation, 2017

From the sample of (n=294) the above table shows:

**Sex as a factor to willingness to pay:** The concern of female and male respondents to adverse health shock through insurance can be predicted from this research. Female respondents who are willing to pay were 54 and male who are willing are 49.

Age group 20-30 and willing to pay were 38, 30-40,40-50 and 50-60 were 21,26 and 18 respectively. Respondents with income level 3000-5000 and willing to pay were 32 and income level with 5000-8000 and willing to pay were 71.

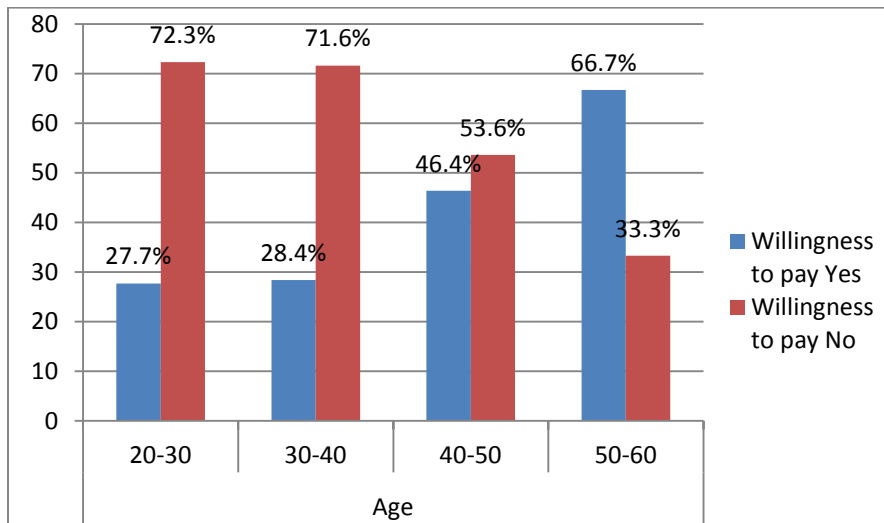
Respondents who have information about SHI and willing to pay were 93 and who have information and not willing to pay were 142. Those who said SHI has value and willing to pay were 89 and who said SHI has value and not willing to pay were 78.

#### 4.2.1. Aging versus Willingness to Pay the SHI premium set by the government

With regard to aging as indicated in table 4.1 most of the respondents (n=294) were with age group 20-30 and constituted the highest percentage (46.6%), but teachers with age above 50-60 are low (9.2%).

Aging could be a factor for willingness to pay the compulsory contribution (3% payroll) of the SHI Scheme. The more an individual gets older the more she/he needs to secure her/ his health. Hypothetically speaking the decision to be enrolled to health insurance and securing health risk pooling could be higher among elderly life than with the youths. The graph (Figure 4.2) shows the relationship between the independent variable, age and willingness to pay the premium. It is possible to infer who are more willing to pay or decline to pay the compulsory contribution of the SHI.

**Figure 4.2: Aging versus Willingness to Pay (Using table 4.5)**



Source: Own Computation, 2017

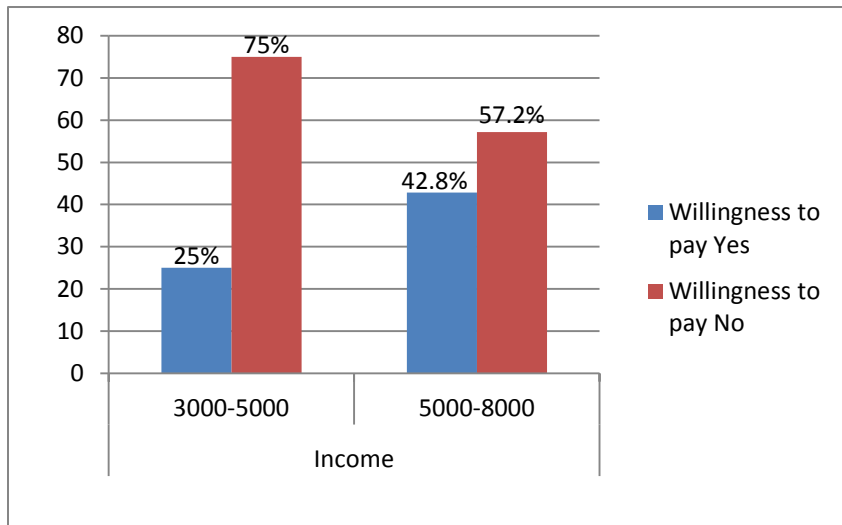
As indicated in the graph many respondents with the age between 20-30 (young teachers) showed unwillingness to pay the contribution of the SHI premium set. Respondents with age 40-50,

albeit they are, very few, showed willingness to pay. Literature indicates that the more the people gets old the higher need being secured in healthcare and want to get treatment in the health facilities. On the other hand young people apparently do not show willingness to pay the SHI premium. Aging matters for healthcare risk pooling and take decision to consider the Social Health Insurance Scheme.

### 4.2.3. Income versus WTP

The monthly salary or income is also taken as a prime factor that could influence willingness to pay the SHI contribution or premium set by the government. Payroll-financed social insurance has many of the same limitations as general taxation in low-income countries, and it will be difficult to meet the enabling conditions that increase the probability of successful implementation of social health insurance schemes and guarantee their sustainability.

**Figure 4.3: Income versus Willingness to Pay (Using table 4.5)**



Source: Own Computation, 2017

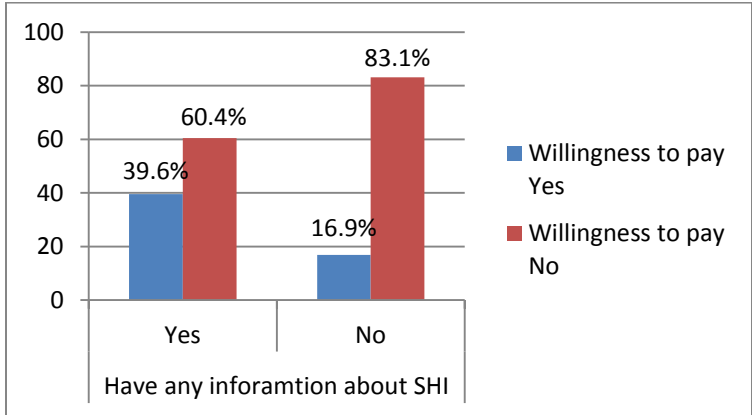
Both respondents who earn from 5000 to 8000 and between 3000-5000 declined to pay the compulsory contribution of the SHI scheme. However, respondents with salary 5000-8000 showed a significant increase to pay. The monthly income for the formal sectors workers would have a significant influence on their willingness to pay for the compulsory payroll of the SHI scheme established by proclamation. The contribution management and control of the finance is regulated by the Ethiopian Social Health Insurance Agency. Workers in the formal sectors are

unpredictable to sustain the Social Health Insurance for there could be mobility from government sectors to private ones. Citizens should agree to pay the contribution with some confidence that their contributions will be used fairly and effectively to fund health care for all those who are part of the system.

**4.2.4. Awareness versus WTP**

Awareness or knowledge about the details of health insurance is one method that encourages people to be enrolled or show willingness to contribute the SHI scheme. What preconditions might lead to the successful development of social health insurance systems in developing countries are important to know. Feasibility of social health insurance in developing countries is neither a good nor bad system in itself. In fact, the success of its implementation in a given country depends on the presence of a series of preconditions and governments’ abilities to influence the factors.

**Figure 4.4. Awareness versus Willingness to pay (Using table 4.5)**



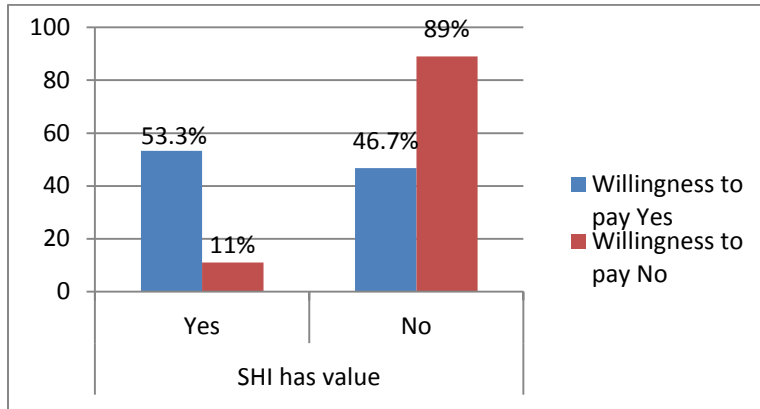
Source: Own Computation, 2017

As presented in (table 4.1.2) 235 out of 294 that are 80 percent of them were aware of. But, as shown in the graph we can observe that respondents who have knowledge or awareness about the SHI scheme, declined to willingness to pay the SHI premium.

On the other hand, respondent who believed that SHI has value in their healthy life showed willingness to pay the premium and equally those who said SHI has no value are not willing to contribute for the SHI scheme.



**Figure 4.5: Value of SHI versus Willingness to Pay the SHI Scheme (Using table 4.5)**



Source: Own Computation, 2017

Experience of respondents about OOP expenses has also an impact on the willingness to pay the SHI premium. The following Figure shows this relationship.

#### **4.2.1 Inferential statistical Analysis**

Chi-square tests used to show the relationship between two variables: dependent and independent variables. In this respect the dependent variable is willingness to pay the compulsory contribution of SHI scheme. And other independent variables include Income, Awareness and OOP experiences. For this, two hypotheses have been predicted as:

$H_0$  (Null hypothesis) hypothesis: There is no relationship between two variables (Age/WTP, Income/WTP, Awareness/WTP, OOP and WTP)

$H_1$  (alternative hypothesis): There is a relationship between two variables: Age/WTP, Income/WTP, Awareness/WTP, , OOP and WTP

**Table 4.6 Chi square test (Relation between dependent and independent variables)**

<i>Independent Variables</i>	<i>Pearson Chi-Square</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>
Age	19.710 <sup>a</sup>	3	0.00
Income	10.028 <sup>a</sup>	1	0.002
Awareness about SHI	10.607 <sup>a</sup>	1	0.001
SHI has value	56.631 <sup>a</sup>	1	0.00
OOP	17.360 <sup>a</sup>	2	0.00

Source: Own Computation, 2017

The above table shows that all the independent variables (age, income, awareness and OOP) have “p” value less than 0.05. Since “P” value ( $p < 0.05$ ) the null hypothesis ( $H_0$ ) has to be rejected. So age, income, awareness and OOP have a strong relationship with dependent variable (WTP). In other words the independent variables age, income and OOP experiences, are parameters or factors that influence WTP. The literature also supports that ageing; income and awareness have direct relationship with SHI. People will be willing to pay if there is a good health facility and income. Moreover people need complete understanding about SHI scheme before they decide to be enrollee for SHI. Even though SHI is a compulsory system people need participation on the decision of the premium. As shown in the table 4.1.4, 65% of the respondents said not willing to pay the set premium and only 35 % said yes.

#### **4.2.2 Logistic Regression Analysis**

Logistic regression is useful for situations in which you want to be able to predict the presence or absence of a characteristic or outcome based on values of a set of predictor variables (independent variables).

Hosmer and Lemeshow test is used for goodness of fit. The null hypothesis is that there is no difference between observed and model predicted values, implying that the model’s estimate fit the data at an acceptable level. That is, well-fitting models show non-significance on the H-L goodness-of-fit test.

**Table 4.7: Hosmer and Lemeshow Test**

Step	Chi-square	df	Sig.
1	4.943	8	.764

Source: Own Computation, 2017

From the above table the H-L statistics has a significance of  $p= 0.764(>.05)$  which means that it is not statistically significant and therefore the model is quite a good fit.

**Table 4.8: Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	290.945 <sup>a</sup>	.263	.363

Source: Own Computation, 2017

In standard regression, the co-efficient of determination ( $R^2$ ) value gives an indication of how much variation in  $y$  is explained by the model. This cannot be calculated for logistic regression but the ‘Model Summary’ table gives the values for two pseudo  $R^2$  values which try to measure something similar. From the table above, we can conclude that between 26.3% and 36.3% of the variation in survival can be explained by the model.

**Table 4.9: Classification table**

Observed		Predicted			
		Willingness to pay		Percentage Correct	
		Yes	No		
Step 1	Willingness to pay	No	22	169	88.5
		Yes	47	56	45.6
Overall Percentage					73.5

Source: Own Computation, 2017

For the above classification table, the columns are the two predicted values of the dependent, while the rows are the two observed (actual) values of the dependent. In a perfect model, all

cases will be on the diagonal and the overall percent correct will be 100%. In this study, 45.6% were correctly classified for the acceptance of WTP and 88.5% for the non-acceptance of WTP. Overall 73.5% were correctly classified.

**Table 4.10: Willingness to pay for the compulsory SHI (n = 294)**

Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Age			8.586	3	.035			
Age(1)	.935	.859	1.183	1	.277	2.546	.473	13.720
Age(2)	.345	.874	.156	1	.693	1.412	.255	7.827
Age(3)	-.645	.941	.470	1	.493	.525	.083	3.315
Income(1)	-.991	.843	1.381	1	.240	.371	.071	1.938
Have any information about SHI(1)	-.044	.453	.010	1	.922	.957	.394	2.326
SHI has value(1)	2.098	.369	32.258	1	.000	8.150	3.951	16.812
Constant	.190	.317	.359	1	.549	1.209		

Source: Own Computation, 2017

This table provides the regression coefficient (**B**), the **Wald statistic** (to test the statistical significance) and the all important Odds Ratio (**Exp (B)**) for each variable category.

Looking from the above results for SHI has value, there is a highly significant overall effect (**Wald=32.258, df =1, p=0.000**). The b coefficient is significant and positive, indicating that increasing affluence is associated with increased odds of achieving *WTP*.

The Exp (B) column in the table presents the extent to which raising the corresponding measure by one unit influences the odds ratio. We can interpret Exp(B) in terms of the change in odds. If the value exceeds 1 then the odds of an outcome occurring increase; if the figure is less than 1, any increase in the predictor leads to a drop in the odds of the outcome occurring.

**From the above table the following results were obtained:**

- Respondents whose age 20-30 were 2 times more likely to be willing to pay as compared to those whose age are above 30-40,40-50 and above 50

- Respondents with income 3000-5000 are 0.371 times less likely to be willing to pay as compared to those with income 5000-8000.
- Respondents who have information about SHI are 0.95 less likely to be willing to pay as compared to those who have no information about SHI
- Respondents who said SHI has value are 8 times more likely to be willing to pay as compared to those who never said SHI has a value.

## CHAPTER 5: CONCLUSIONS AND RECOMMENDATION

This chapter treats the conclusions and recommendation of the research. Based on the findings in Chapter four -the data analysis and presentation the conclusion of the study is presented below.

### 5.1. Conclusions:

This research has analyzed factors that influence individuals' willingness or decision to pay the compulsory contribution of the SHI scheme (3% payroll) among the 294, Elementary and Secondary School Teachers in Addis Ababa. Data was meticulously analyzed using CsPro, SPSS and Excel software programs. Using cross tab technique factors like age, sex, income, awareness and experiences of individuals' out of pocket expense during sudden sickness have been computed with the dependent variables "willingness or not willingness" to pay the compulsory SHI scheme.

The results showed that there is a complete decline of willingness to pay among males compared to females. Apparently females assume more concern on the health care. With respect to age and income differences, the same results have been obtained. Respondents with age 20-30 and 30-40 declined to pay while very few with age 50-60 showed willingness to pay. With respect to income or monthly salary, respondents with a salary 3000-5000 and 5000-8000 declined to pay the compulsory contribution of the SHI scheme.

This concludes that the less the age and income the less the willing to pay. This assumes age and income influences the willingness to pay or the decision to contribute the compulsory SHI Scheme.

Also about 60.4 percent of the respondents were aware about the SHI scheme but their willingness to pay decreased significantly. On the other hand, about 89% of the respondents believe that SHI has no value or advantages but decline willingness to pay. This concludes that Lack of awareness and deep knowledge about SHI scheme has impact on the willingness.

Though, findings indicate OOP's expense experiences are expensive in both government and private health facilities also declined to pay the contribution of SHI scheme. Moreover, other findings indicate that respondents preferred government subsidize all civil servants and establish trust on the service delivered from health facilities. This can be concludes that the policy makers need to undertake strong provisions before launching SHI Scheme.

## **5.2 Recommendations:**

The general objective of this research study was to analyze factors influencing willingness to pay for compulsory contribution of SHI scheme. Specific objectives were to analyze awareness level of individuals about SHI scheme, the OOP expense experience and willingness to pay the 3% pay roll. Related with this questions respondents were asked whether they have a belief in the value of SHI and if they are not willing what reasons they would suggest.

Since the finding indicates about 89% of the respondents believe that SHI has no value or advantages, but showed unwillingness to pay need a detailed knowledge and awareness to formal sectors. On the other hand there are significant numbers of respondents who have simple information about SHI but not willing to pay the SHI scheme and gave reasons that they don't have trust on the health services.

The second recommendation is to encourage female formal sectors and make them vanguard for willingness to pay. Since the result show a significance ratio compared to male respondents.

Albeit the healthcare financing of the country used to stem from two sources: the (general revenue) form the government and from the donors, the FMOH in its HSTP (2015/16-2020 plan has projected a 501,775,016.67USD contribution from SHI. But, the sustainability of the formal sector workers in a country in transition and their intension to join to private sectors would make SHI not sustainable. As a result payroll-financed social insurance has limitations in low-income countries, and it will be difficult to meet the enabling conditions that increase the probability of successful implementation of social health insurance scheme and guarantee its sustainability.

Ethiopian economy recently is not growing as was pervious fiscal years. Rapid economic growth is the major preconditions for implementing social health insurance. Rapid economic growth will therefore enable a nation to move toward universal coverage. In countries where growth is very slow or nonexistent, it might be better to wait, because social health insurance will not be able to mobilize additional resources.

## References

- AlemakefTassew and Akhila S. Nair. Analysis on Public Green Spaces in KolfeKeraniyo Sub city, Addis Ababa, Ethiopia. Journal of Aquatic Biology and Fisheries Vol. 2/No. 2/2014/pp. 7 to 15.
- Carrin, G., Desmet, M and Basaza, R.(2001). Social Health Insurance Development in developing countries: a study of its contribution to the performance of health financing systems. Tropical medicine and International Health
- Charles I. Jones (2013). Introduction to Economic Growth. W.W.Norton & Company, Inc.
- Charles Normand and Alex Weber: Social Health Insurance: A Guide Book for Planning, July 1994
- David W. Hosmer and Stanley Lemeshow (2000). Applied Logistic Regression (2<sup>nd</sup> ed.) John Wiley and Sons, Inc
- Federal NegaritGazeta(2010, August). Social Health Insurance Proclamation Page 5494.
- Federal NegaritGazeta(2010, December). The Ethiopian Health Insurance Agency Establishment Council of Minister Regulation Page 5673.
- Guy Carrin and Chris James (2004). Reaching universal coverage via social health insurance. Geneva (World Health Organization)
- Health Policy and Planning; 19(6). Oxford University press, 2004. pp. 349-355
- Hiaso W.C and Shaw R.P. Social health insurance for developing nations. Washington: the international bank for reconstruction and development. The World Bank 2007
- Milo Nancy. The care of health in communities. Newyork, 1975
- Moore, D.S, Nortz, W.I, & Flinger, M.A. (2013). The basic practice of statistics (6<sup>th</sup> ed.). Newyork, NY: W.H. Freeman and company.
- Pablo Gottret and George Schieber. Health Financing Revisited, A Practioner's Guide. The International Bank for reconstruction and development/The World Bank, 2006
- Robert Burns and Richard Burns (2008). Business Research Methods and Statistics Using SPSS



Small-Sample Techniques.*The NEA Research Bulletin*, Vol. 38 (December, 1960), p. 99.

The Federal Democratic Republic of Ethiopia Ministry of Health. Health sector Transformation plan, 2015/16-2019/20(2008-2012EFY) August 2015

## Annex

### St MARY’S UNIVERSITY

#### INSTITUTE OF AGRICULTURE AND DEVELOPMENT STUDIES

#### DEPARTMENT OF DEVELOPMENT STUDIES

I invite you to participate in a research study entitled “ANALYSIS OF FACTORS INFLUENCING INDIVIDUAL’S WILLINGNESS TO PAY FOR THE COMPULSORY SOCIAL HEALTH INSURANCE SCHEME: WITH A FOCUS AMONG THE GOVERNEMENT SCHOOL TEACHERS IN ADDIS ABABA” at St Mary’s University. Your correct answers to these questions can make the study to achieve its goal. All information gathered is very confidential and directly or indirectly will not have any influence on you.

Direction: Please know that you are not required to write your name. Your answers are kept confidential and please put your answers in the box provided. Thank you

#### Section One: Background Information

- |      |                          |   |
|------|--------------------------|---|
| 100. | Sex                      | 1. Male <input type="checkbox"/> 2. Female <input type="checkbox"/>   |
| 101. | Age                      | 1. 20-30 <input type="checkbox"/> 2. 30-40 <input type="checkbox"/> 3. 40-50 <input type="checkbox"/> 4. 50-60 <input type="checkbox"/>               |
| 102. | Marital Status           | 1. Unmarried <input type="checkbox"/> 2. Married <input type="checkbox"/><br>3. Divorced <input type="checkbox"/> 4. Widowed <input type="checkbox"/> |
| 103. | Education level          | 1. Diploma <input type="checkbox"/> 2. B.Sc/BA <input type="checkbox"/><br>3. M.Sc/MA <input type="checkbox"/>  |
| 104. | Monthly salary or income | 1. 3000-5000 <input type="checkbox"/> 2. 5000-8000 <input type="checkbox"/>   |

#### Section Two: Level of awareness about SHI scheme of Ethiopia and preferences

- |      |   |  |
|------|---|--|
| 200. | Do you have any information about social health insurance scheme? | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> -----If NO Skip to Q203 |
|------|---|--|

201. If you say **yes** on Q200, how did you hear the information? 1. Radio  2. Television  3. Internet   
4. Newspaper  5. Other
202. If you say **yes** on Q200, do you know the monthly premium/payment set is 3 percent from the payroll to be beneficiary to Social Health Insurance? 1. Yes  2. No
203. Do you think that the program Social Health Insurance scheme has a value for yourself? 1. Yes  2. No .....If No skip to section 3
204. If you say **yes** on Q203, what are the reasons to favor Social Health Insurance 1. The SHI has value for keeping healthy life  2. Decrease risk of out-of-pocket payment  3. Make me check/visit hospital often

### Section Three: Out of pocket expenditure(OOP) experiences

300. How much is your or your family currently (this year) health expenditure? 1. < 1000 birr  2. 1000-2000 birr   
3. 3000-4000 birr  5. 4000-5000 birr   
6. 5000-6000 birr  6. > =6000 Birr   
7. None
301. From your experience, do you say the expense from your pocket for treatment during sickness is expensive? 1. Yes, it is very expensive   
2. Expense is medium   
3. No, it is not.

### Section Four: Willingness to pay the set premium for SHI

400. Are you willing to be insured in the Ethiopian SHI scheme? 1. Yes  2. No
401. If you are not willing to be a member- what would be the reasons? 1. I don't have enough money to pay  2. I want to pay from my pocket   
3. Lack of trust in the service  4. Lack of trust in management and budget use

402. The premium set for the health insurance is 3 percent of the payroll. Are you willing to pay? 1. Yes  2. No
403. If you are not willing to pay what are your reasons?
1. 3% payroll rate of payment/premium decided is too high
2. I believe Government should subsidize all civil servants
3. My monthly salary is too low
4. Government tax from my income is high.
5. Have no trust on the service delivered from health facilities
404. What would be your proposal for the SHI premium if you need to be insured and get the necessary benefits/services? \_\_\_\_\_