ASSESSMENT OF ETHIOPIAN COMMUNITY BASED HEALTH INSURANCE AT SOUTH ACHEFER WOREDA, W/ GOJJAM, AMHARA REGIONAL STATE

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirement for the Degree of Master in Regional and Local Development Studies

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LIST OF TABLES AND FIGURES

ACRONYMS

ARS- Amhara Regional State

BPR- Business Process re-engineering

CBHI—Community Based Health Insurance

CHI- Community health Insurance

ECBHI-Ethiopian Community Based Health Insurance

FGD- Focus Group Discussion

GDP – Gross Domestic Product

GNP—Gross National Product

HEWs- Health Extension Workers

HH- Household

HO- Health officers

ILO- International labour Organization

MLI— Ministerial leader ship initiative

MNL- Multinomial logit

MoHE—Ministry of Health Ethiopia

MoHR- Ministry of Health Rwanda

NGO- Non Governmental organizations

NHA- National Health Account

OECD- Organization for Economic Co-operation and Development

OOP- Out-of pocket

RHB- Radiologic Health Branch

RWF-Rwanda Franc

SHI—Social Health Insurance

SNNP—Southern Nations and Nationalities and Peoples

UHC- Universal Health coverage

USAID- United State Aid for International Development

WFPHA—World Federation of Public Health Association

WHO- World Health Organization

ABSTRACT

The problems of translating economic growth in to improved health and the inability to finance the health sector without affecting the poor in accessing health services begets a set of social policies required to promote health. One alternative to covering poor people in the informal sector is community-based health insurance (CBHI) schemes. Community-based health insurance development is a potential strategy to meet the urgent need for health financing in low-income countries. Currently Ethiopian Community Based Health Insurance scheme is adopted in a selected thirteen woredas of four regions (Tigray, Amhara, Oromia and SNNP) as a first pilot program.

The program at South Achefer woreda is severely affected by the inefficiencies of the health centers, administrative complexity, low enrolment ratio and under representation of the poor. This study is aimed to assess the performance of Ethiopian Community Based Health Insurance at South Achefer Woreda. In doing so both quantitative and qualitative research approaches is employed.

Ensuring equity in enrollment through identification of and premium exemptions for individuals and groups without adequate financial resources to pay referred to as indigents or the "poorest of the poor", is one of the stated goals of the Ethiopian CBHI. The identification and selection of the poorest of the poor is participatory. The CBHI management board does not have any mechanism to check whether or not these households really are 'ultra poor',

The program is financially sustainable for 2011/12 and 2012/13 years at the woreda. But the scheme was financially viable 2011/12 than 2012/13 or the scheme at the woreda is financially viable at the decreasing rate.

Ethiopian CBHI members at South Achefer Woreda explained that, compared to the previous period when they were not insured, they visited health facilities more often because all the financial barriers to the health service is removed.

Payment problem, gender of the household head, net income, chronic medication, administrative complexity and education of the household head are statistically significant factors that affect the insurance intake decision of household heads at the study area.

CHAPTER ONE

1.1 Background of the Study

Development doesn't mean a mere increase in per capita income or gross domestic product (GDP), it has many more subtle elements, to do with education, inequality, health, and etc. Development is therefore generally understood as the process of improving the quality of all aspects of human life in income, education or health. A complex interrelationship exists between health and development; it is certainly not a one-way relationship, but a reciprocal i.e. economic development can lead for health improvement and an improved health can be considered as an indicator of development. However, many have contested the centrality of economic growth to health, while it is true that increased economic growth provides the resource base to develop and strengthen health systems, increases in GNP are not always translated into health improvements. It is not only the absolute availability of resources, but rather how these resources are distributed and used (IDRC, 2009: 233).

Accordingly, economic growth does not automatically translate into improved health. For this reason, health improvement programs are central to any development strategies. In developing countries neither the state nor the market is effective in providing health insurance to low-income people in rural and informal sector. In rural and informal sector where supply of health services is expected to be weak, both financing and provision aspects need to be tackled simultaneously (Ibid).

Modern health care systems cannot be financed from the out-of-pocket expenditures of patients. The mismatch between individual resources and health care needs dictates that the costs of individual care are largely met from the pooled contributions of groups (Evans, N.D:1).

The Ethiopian health finance is derived from direct government expenditure which account for 31%, development partners and aid organization which account in sum 39% and diverse forms of out-of-pocket payment by users of care or patients which accounts30% (MoHE, 2011:1).

This indicates that out- of- pocket payment by users of the care holds a significant portion in the countries health finance. The out- of- pocket contribution of patients do have a great leverage on

the society especially on poor in health service accessibility (Ibid). A tax funded health system may not be easy to develop, due to the lack of a robust tax base and a low institutional capacity to collect taxes and weak tax compliance (Carrien, 2003:6).

How societies pay for health care, and how many resources they devote to health, affects both the care people can get and its quality. In most developed countries, health care is paid for largely by the government or market- based approach that is, paid directly by patients. These two broad approaches to financing health care – market-based and government financed-is not perfect in all aspects. Health services should be provided according to people's need rather than to their individual capacity to pay for health services (Ibid).

Health security is increasingly being recognized as integral to any poverty reduction strategy. The state in most developing countries has not been able to fulfill health care needs of its poor population. Shrinking budgetary support for health care services, inefficiency in public health provision, unacceptably low quality of public health services, and the resultant imposition of user charges is reflective of state's inability to meet health care needs of the poor (Ashuja & Jutting, 2003:1).

The problems of translating economic growth in to improved health and the inability to finance the health sector without affecting the poor in accessing health services begets a set of social policies required to promote health, and it is widely recognized that in the absence of such policies, fast economic growth may only benefit a few. One alternative to covering poor people in the informal sector is community-based health insurance (CBHI) schemes. Community-based health insurance development is a potential strategy to meet the urgent need for health financing in low-income countries (Peilemier & Wang, 2012:1).

Currently Ethiopian Community Based Health Insurance scheme is adopted in a selected thirteen woredas of four regions (Tigray, Amhara, Oromia and SNNP) as a first pilot program. From this Tigray, Amhara and Oromoia hosts three woredas each and SNNP hosts four woredas.

Fogera, South Achefer and Tehuledere are the three selected woredas of the first pilot of the scheme at Amhara Regional Sate. The program in these woredas is severely affected by the

inefficiencies of the health centers, administrative complexity, low enrolment ratio and under representation of the poor.

For example in South Achefer woreda where this study was conducted total of 148,975 people were targeted to enroll in to the CBHI but it is unable to enroll more than 31,419 of total population with the two years experience. The government's promise to sponsor only 5%, for the first two and half years it was 10%, of the poor while the proportion of the poor accounted 29% at the national level and the proportion of the poor in South Achefer Woreda believed to be not far greater and less than this figure(29%). For this reason the poor is under represented in the program. ARS (2011) revealed that the existing status of health centers is not in a position to provide sufficient health care services.

1.2. Statement of the Problem

During the last one and half decades the Ethiopian Federal Ministry of Health took several measures to improve health for all and to increase access to health care to its citizens. This has included a wide range of strategies such as Making Pregnancy Safer (2000), Reproductive Health Strategy (2006), Adolescent and Youth Reproductive Health Strategy (2006), the Revised Abortion Law (2005), Health Care Financing Strategy and the training and deployment of new workforce of female Health Extension Workers (HEWs). Despite these major strides to improve the health of the population in the last one and half decades, Ethiopia's population still face a high rate of morbidity and mortality and the health status remains relatively poor (MoHE, 2010). Both supply and demand side constraint are responsible for this relatively poor health status of the country. On the supply side shortage of skilled man power, week referral system and under financing of the service and on the demand side let alone other constraining factors financial barriers were the major constraint for the relatively low health service accessibility of the population (Ibid).

Ethiopia recently embarked on an initiative to provide social and community-based health insurance throughout the country. The recently proposed social health insurance will serve citizens paying taxes in the formal sector, and the community-based program target those who are not part of the formal sector. More than 80% of total private health expenditure in Ethiopia is in the form of out-of-pocket payments, revealing an inefficient, inequitable structure of private

health expenditure. It is hoped that insurance will help stabilize the government's health budget, and make financing more efficient and equitable, thereby bolstering the country's Health Sector Development Program (MLI,2012:1). Although these are all encouraging endeavors toward making quality and equitable health services available to the majority of Ethiopians, there are several challenges that need to be addressed in order to fully realize the implementation of health financing mechanisms to reduce barriers of access to health services.

Ethiopian CBHI is designed as a tool for achieving several goals: mobilizing more funds for health, promoting equal access to reasonable health care for the poor, pooling health risks and preventing impoverishment, and improving the efficiency and quality of health care (MoHE, 2010)

It is widely recognized that the success of a CBHI system depends largely on its ability to enroll and collect premiums from the population and the government's ability to subsidize premiums for the significant portion of the poor. But the observation shows that underrepresentation of the poor and low enrolment rate even among the rich.

Currently Ethiopian community based health insurance scheme is adopted in a selected thirteen woredas of four regions (Tigray, Amhara, Oromia and SNNP) as pilot program. Against the theory that the positive experience of some households or community members with health insurance creates trust in the new institution and it also encourage people to prolong their membership and convince other to join the scheme and therefore, the demand for health insurance increase (Ashuja & Jutting, 2003), the Ethiopian CBHI is failed to hold all eligible population or enrolled only a small proportion of the eligible population and government's promise to sponsor only 5% of the poor while the proportion of the poor accounted 29% at the national level and the proportion of the poor in South Achefer Woreda believed not far greater and less than this figure(29%). For this reason the poor is under represented in the program. According to Barnet I and Bekele T (2010) in the quantitative survey households were asked how they would prefer to pay for healthcare. Around 40 per cent of all households stated that they simply could not afford to pay at all.

In addition to these according to the Woreda CBHI coordinator fee waivers and exemptions aimed at protecting poor households were found to often suffer from leakage, under-coverage and problems with targeting.

In South Achefer woreda where this study was conducted total of 148,975 people were targeted to enroll in to the CBHI but it is unable to enroll more than 31,419 of total population with the two years pilot experience. This is due to the reason that all the goals of Ethiopian CBHI, i.e. mobilizing more funds for health, promoting equal access to reasonable health care for the poor, pooling health risks and preventing impoverishment, and improving the efficiency and quality of health care, depends on the numbers of population who enrolled by the program either by government sponsorship or by the monthly fees of eligible members. How many people included in the scheme is a big deal for the effectiveness of this scheme. Experiences of some countries suggest, that very small schemes are difficult to sustain. The declining penetration rate in enrolment reduced the size of the risk pool and the premium inflow.

With the interview with the CBHI coordinator the researcher found that "there is a tendency that family leaders make some of their members out of the insurance in the calculation of 'they will not be sick'. In this calculation the adult age group is out of the scheme, it is only the old aged and the childrens. This will severely affect the financial efficiency of the program.

CBHI Health centers' assessment report where this program is going to be implemented in Amhara region, Fogera, South Achefer and Tehuledere, revealed that the existing status of health centers is not in a position to provide sufficient health care services (ARS, 2011). Problems of drug, regent supply, man power, furniture, water supply and electricity is common in all health centers. It is the degree that differs.

The rural health centers patient visit is low mainly associated with the poor service they got. People go to them if and only if they face an acute illness and/or accidents. When one ask people why they do not visit the nearby health center, they mostly raise issues of poor quality health service (Ibid). The program which was priorily designed to redress the health needs of the rural poor could not be effective with these insufficient health centers.

In South Achefer Woreda with the standard in mined the number of technical staff in the six rural health centers of South Achefer host only 2 Health Officers (HO) (16.6 %), 4 mid wives (22.2%), 28 nurses (39%), zero environmental health worker, 7 laboratory technicians and 8 pharmacy technicians which is 38.8 and 44.4 percent of the standard respectively (ARS, 2011).

More over the program is heavily dependent on subsidies from the federal, regional and woreda governments. For this reason the overall sustainability of the scheme does not seem to be assured without such subsidies.

These are among the most important problems that need to be addressed. Accordingly, it is logically right to do a research on the Ethiopian CBHI. Because all the targets of the ECBHI cannot be fulfilled with low enrolment rate, low financial viability, insufficient health service, adverse selection and underrepresentation of the poor.

1.3. Objectives of the Study

1.3.1. General Objective

The general objective of this study is to assess the performance of Ethiopian Community Based Health Insurance at South Achefer Woreda.

1.3.2. Specific Objectives

In conjunction with the fulfillment of its general objective, this study tries to fulfill the following specific objectives:

1. To assess how indigents of the program selected in South Achefer Woreda.
2. To assess the financial efficiency (claim ratio and government grant ratio) and the current status of health centers to run this program in South Achefer Woreda.
3. To assess the contribution of the scheme for populations access to health service in South Achefer Woreda.
4. To critically assess factors that affect households' enrolment into the scheme in South Achefer Woreda.

1.4. Significance of the Study

The study will contribute towards an assessment of factors that affect households' enrolment in to, the financial viability of the program and the contribution of the program in accessing the poor to health facilities. Furthermore the study will serve as the basic document for other research.

1.5. Limitation of the Study

The reluctance of the respondents to disclose relevant information because there was suspicion toward data collection and time, finance, the settlement pattern of rural households which is spars in character, unavailability of a household leader in home during a questionnaires distribution period.

1.6. Scope of the Study

While Ethiopian community based health insurance has a variety of issues that need to be assessed, this study is focused on factors that contribute families to do not be a member of this scheme, the contribution of the program for the health accessibility of the population, the financial viability of the program, the efficiency of the health centers to deliver service for the population and the issue of indigent selection/ people that need to be free of charge to use the benefits of the program. This study is further limited on South Achefer woreda which is in West Gojjam administrative Zone of Amhara regional state, though the program was initiated in thirteen woredas of the country, i.e. three in Tigray, three in Amhara, including South Achefer woreda, three in Oromia and four in SNNP regional states. Furthermore this study was focused only on purposively selected kebeles of the woreda which has low enrolment rate in the community based health insurance. Accordingly, this study is more emphasized on an assessment of enrolment conditions to community based health insurance, the financial viability of the program, the way indigents selected, the capacity of health centers and the contribution of the program for the populations' access to health at South Achefer woreda.

CHAPTER TWO

2.1. Research Methods and Methodologies

2.1.1. Background of the Study Area

South Achefer woreda is purposively selected for the reason that unlike other pilot woredas this woreda go with the principles of CBHI as enacted by the regional state, for example, unlike other pilot woredas in South Achefer woreda a single or some individuals within a family cannot be a member of the program unless the whole family becomes a member of the program and it have a better performance in enrolment.

It is located in West Gojjam administrative zone of Amhara regional state. According to the 2007 national census the woreda was estimated to have 160,635 of total population, of which 81,855 were males and 78,780 were females which settled on 1185.05 Km^2 area of land. The woreda is divided in to 20 administrative kebeles, two urban and the remaining are rural in character (South Achefer Bureau of Finance and Development).

2.1.2. Research Approach

Quantitative research approach was employed to analyze data that are collected through closed ended questionnaire and data which was metric in character. The qualitative research approach was employed to analyze data which were collected through non participant observation, key informant interview and focus group discussion. Thus the research approach employed in this study was mixed method.

2.1.3. Sampling and Sampling Techniques

A multi stage systematic sampling technique was used in this study. Purposively from 20 total kebeles of the woreda six kebeles such as Durbete 01, Care, Lalibela, Corench, Lihudi and Asuda with 42.28%, 47.57%, 35.69%, 45.51% 41.98% and 39.12% enrolment rate parameter were selected. Kebele was also chosen on the basis of being urban, (only Durbete 01 kebele), but it has also low enrolment rate as much equal as other selected kebeles, in order to assess the variations of enrolment between rural and urban kebeles and having low enrolment rate. Two kebeles viz. Mara and Chaba with 42.64% and 42.19% enrolment rate respectively was excluded

from being sampled as these two kebeles are neighbors and the population is very homogeneous as per the researcher's observation is concerned with Ashuda kebele with 39.12% enrolment rate. From these three homogeneous kebeles Ashuda was selected from the fact that it had low enrolment rate than others, Mara and Chaba.

For the purpose of representative sample selection the population was divided in to eligible CBHI non- members and members. Questioners were distributed for these households in random base at these kebeles and in category created i.e. eligible non members and members. A questioner was not administered if an individual is not a head of the household.
Random sampling method was used to select 836 households from these purposively selected kebeles. They were interviewed about the determinant factors associated with enrolment in to the scheme. The questioner was distributed for 2013/14 members and non members.

A separate and joint focus group discussion not exceeding 12, for each categories, participants with those whom members and eligible non members of the insurance was conducted. Participants included in this study are members of the year 2013/14 and non members of same year.
In order to know the efficiency of the health centers census sampling technique i.e. all health centers of the woreda was sampled, they are seven in number.

In addition to this house hold survey community based health insurance coordinators, woreda administrator and kebele administrators and directors of the health centers was interviewed in order to get complementary information about the functioning, problems and success of the insurance at the woreda level. The survey for all methods of data collection which is adopted in this study was conducted between January 28 and April 8 of 2014.

2.1.4. Sample Size Determination

In order to objectively determine the sample size the pilot study of the area was conducted and the exact figure of eligible non-members and members was identified. The sample size were determined with the below mentioned formula at 95% degree of confidence and with 5% of estimated defective for different exact figures of the category i.e. member and non member.

$$n = \frac{z^2 p q. N}{e^2 (N-1) + z^2 p}$$

But the output of this formula was huge and at the same time the population is somewhat homogeneous. For this reason the results of the formula was deducted with 50%. For the purpose of incomplete questionnaires 10 extra households for each kebele was added. Accordingly 150, 149,142, 113, 149 and 133 households were selected from Durbete 01, Care, Ashuda, Corench, Lalibela, and Lihudi respectively. Totally 836 households were selected from the purposively selected woredas. Of 836 sampled households, 813 participated in the study, which yields a response rate of 97.248%.

2.1.5. Data Collection Instruments

2.1.5.1. Questionnaires

Quantitatively the questionnaires were distributed for the target population and an information was poled that serve to answer the important questions of this study. A cross-sectional survey with on-the spot household interviews was carried out, using a structured questionnaire. The questionnaire was based on the objectives described above. The questioner was captured data on household heads' level of education, family size, marital status, income level, the condition of chronic medication in the family, administrative complexity of the program, benefit packages, and the ability to pay the premium. The questioner was same for members of the scheme and non members. A questioner having a missing data was excluded because it will weaken the analysis. Because almost all respondents are unable to read and complete the questioner; serving the questioner as the bases the interview was conducted by the data collectors. But if the household leader was able to read and complete the questioner the data collectors made them free. The questioner was not distributed if a household head is an indigent member. Because it was perceived that these household head will respond in favor of the scheme.

This survey was conducted through trained enumerators whom all are jobless BA degree holders. These enumerators were taken training on the objectives of the study and the clarification of some concepts included in the questioner by the researcher. These enumerators conducted the

data collection through the structured questioners under the close supervision of the researcher himself.

Because it was recognized that the use of enumerators who were based in the surveyed kebeles could pose problems, for example in terms of the possibility that some respondents might be unwilling to disclose some sensitive information to such individuals. The enumerators were employed after the confirmation of them not living with the kebele and did not have a relative at the kebele.

The questioner was translated into Amharic language and the ethical and technical approval for the questioners was obtained from Dr. Mulugeta Abebe (Phd. at AAU), whom my advisor.

2.1.5.2. Focus Group Discussion

Separate (with members and non members) and joint (both with members and non members) focus group discussion with the targeted population of the selected kebeles was conducted. The discussion with non members was focused to pick out factors that hinder them to don't be a member of the scheme. The discussion with members was focused on the challenges they faced in their stay as a member of the scheme. In the joint focus group discussion the issues raised at the separate discussion was further triangulated. In this discussion issues like an access for the health service, the factors that hinder households to do not be the member of the program, the challenges they observed in using the scheme and the capacity of health centers were raised. The participants of the focus group discussion were the heads of a family or individuals living lonely without supported by others and above the age of 18.

To this end the researcher requested the kebele administrators that participants of the focus group discussion to be a mixed group of men and women from the varied socioeconomic background and have a better knowhow about the scheme than other households. In all kebeles paid kebele administrators assist the researcher in the selection of participants of the focus group discussions. The participants were a mixed group of men and female household leaders and as clearly demonstrated during the discussion the participants had a better knowhow about the program. The discussion was terminated when the issues raised by the participants were repeated again and again.

All discussions were held in the Amharic languages and were recorded on flip chart, audio recorded and later transcribed.

2.1.5.3. Key Informant Interview

Separate special interview with selected personalities, like, Woreda CBHI coordinator, wereda and kebele administrators and Health center directors was conducted and analyzed accordingly. The interview with the woreda CBHI coordinator, woreda and kebele administrator was focused on the challenges that program faced, the indigent selection, and the way the program is going. The interview with the directors of the health centers was focused on the efficiency of the health centers to run with the program.

2.1.5.4. Non participant observation

In addition to focus group discussion and interview formats, direct personal observation of the living conditions of households, the size of the family with each household and the administrative conditions for the effective implementation of the scheme and conditions at the health centers for the members of the CBHI by the researcher was conducted in order to further triangulate the data gathered in other formats.

2.1.5.5. Quantitative Document Review

Different kinds of quantitative data like the number of patients take medical service before and after the beginning of the program, the total cost of claims come from members of the CBHI, amount of premium collected from them, the amount of total government grant (federal, regional and woreda), total number of enrolled population and household, total number of targeted population and household and the health centers staff composition and number by category(HO, Midwives, Nurses, environmental health specialist, laboratories and pharmacist) was collected from study woreda offices and used.

2.1.6. Data Analysis Methods

2.1.6.1. Qualitative Data Analysis

Data that collected with the aforementioned qualitative formats was grouped and categorized and finally presented in narratives and direct quotations.

2.1.6.2. Quantitative Data Analysis

2.1.6.2.1. Members and Non Members' Health Service Usage

If access to health services is improved through CBHI schemes, this should be indicated through a comparison of the utilization rate of health services by CBHI members versus non-members. The utilization rate of health services for CBHI members is calculated as the total number of benefits used by CBHI members in a year, divided by the average number of CBHI members in that year. The utilization rate of health services for non-CBHI members is calculated in the same way (total number of benefits used by non-CBHI clients in a year, divided by the average number of non-CBHI clients for that year) (Stoermer et al., 2012).

A health service utilization rate of 100 per cent means that CBHI members (or non-members) visit their health care facility once a year, more than 100 per cent means that members (or non-members) visit more than once a year and less than 100 per cent, less than once a year. A comparative health service utilization rate of more than one means that CBHI members use health care services more than the non-members (Ibid). This result will be analyzed in the form tables and descriptions. In order to understand the relationship between new health financing strategies and health care access patient flows before and after the start of CBHI was employed.

2.1.6.2.2. Financial Efficiency

The financial efficiency of the program was calculated with claim ratio and government grant ratio. Claim ratio is the function of claim per earned premium. Government grant ratio is the function of the amount of the annual government grant per enrolled households divided by the annual premium paid by the household.

A 100 per cent claims ratio means that 100 per cent of the premium earned is used to pay claims. Schemes with 100 per cent (or more) claims ratios are not financially viable because the claims paid are higher than the premiums earned. The government grant ratio below one means the scheme receives less from the government as an annual grant than premiums paid by households. The inverse is true if the government grant ratio is above one (Ibid).

2.1.6.2.3. Coverage of CBHI

The coverage of the program is the function of two factors i.e. enrolment and dropout. The coverage of the CBHI can be evaluated with an enrolment formula which is enrolled population per targeted population and dropout rate calculation which is total enrolled population per total dropout population. Though coverage is the function of these two factors dropout rate was not considered because the dropout rate is very low in the woreda.

These formulas were used to know the enrolment and dropout rate of kebeles that was selected for the distribution of the questioner.

In order to know the factors that affect the enrolment decision of households to the scheme two dependent variables was created: members and non members. For the purpose of analyzing these dependent variables; variables that affect these dependent variables were used as independent variables.

Dependent Variables

A binary coded dependent variable that shows the enrolment status of the household was created (Member household and non member household)

Independent Variables

Chronic Medication

The variable chronic medication was created because this variable can determine the insurance intake decision of households. A household head was asked if there is household member suffering from any illness that was continuing for long period of time.

Administrative Complexity

This variable was created to measure the effect of perceived and actual administrative complexity for the households' decision of insurance intake.

Health Centers Efficiency

This variable was created to know the effect of the availability and unavailability of efficient health centers on the insurance intake decision of households. It is assumed that households might deter themselves from being the member of CBHI scheme if there are perceived or actual inefficient health centers at the woreda. The inverse is true if there are efficient health centers.

Benefit Packages

This variable was created because the availability of vast or narrow benefit packages can determine the insurance intake decision of households.

Income

This variable was created to know the influence of yearly net income of the household on being membership and non membership to CBHI. It was assumed that households with higher income would have higher enrolment because they could better afford to pay for CBHI, compared to lower income households.

Other Variables

In addition to chronic medication, administrative complexity, benefit packages and income of the household other variables were also included; sex, age, education status of the household head, family size and marital status.

Statistical Model Specification

For the matter of knowing the correlation among the dependent and independent variables the study employed the Spearman rho correlation function since the variables of this study are categorical in character. A binary logistic regression model is employed to investigate the factors that affect the membership decision of households. The membership and the non membership

decision of households and the independent variables used to determine the dependent variable in this study were categorical in character. According to statisticians such kind variables are best to be analyzed through binary logistic regression model.

$\log\left(\frac{P}{1-P}\right) = \square + B1X1 + B2X2 + \ldots\ldots BnXn$ where;

P is the probability of being member into CBHI while 1-p is the probability of non member to the scheme

B1, B2.....Bn are the coefficients of each of the predictor variables;

X1,X2,.....Xn are the independent variables that affect the membership decision of households into the scheme and for this study they are place of residence, gender, marital status, number of dependent children, education, health centers efficiency, benefit packages of the scheme, payment problem, net annual income, chronic medication and administrative complexity.

From this formula we can derive the probability of the membership decision of households in terms of exponential function and can be written shortly as follows;

$$P = \frac{e^{\acute{\alpha}+B1X1+B2X2+\cdots B10X10}}{1+e^{\acute{\alpha}+B1X1+B2X2+\cdots B10X10}}$$

Where, $\acute{\alpha}$ = Constant of the Binomial regression model

B1 = Place of residence

B2 = Gender of the household head

B3 = Martial status

B4 = Numeber of dependent families

B5 = Health centers efficiency

B6 = Benefit packages

B7 = Payment problem

B8 = Net annual income

B9 = Chronic medication

B10 = Administrative complexity

B11 = Education

The coefficients in the model can be described as the log odds for a given category of variable over the odds for the base category of the same variable. To simplify interpretation, results were expressed in terms of odds ratios calculated by exponentiation of the parameter estimates.

2.1.6.2.4. Health Centers Check List

The condition of health centers, their capacity, was assessed with a check list which is adopted from Ethiopian Standardization Authority with some amendments in the way which is pertinent to this study. The check list include health services delivered at the health center, medical staff composition, room arrangement, governance and human resource services, medical services, building and outpatient lay out conditions and surgical and laboratory services. This check list was filled by employee health officers.

CHAPTER THREE

3.1. Conceptual and Empirical Survey

3.2. Introduction

In this part studies of similar nature were reviewed extensively. CBHI is a new and emerging social protection technology in many parts of the developing world. Track records are short, and empirical evidence upon which conclusions about impact and sustainability can be reached is limited.

Taking the fact that the issue raised is too current in Ethiopia (three years of pilot implementation) no full study on the CBHI is found except about the interests of individual for the payment modalities included in Morestin F and Riddle V (2009).

In this survey of related literatures studies of middle and high income countries, studies published before 1980s and studies on other health insurance such as private and social (if they are targeted individuals in the formal sector) were excluded from being included in the survey.

Studies that arrived at their findings based on value judgment and self perception without using any data were excluded. Similarly, studies that did not provide clear information on the research methods applied and the schemes studied in their analysis were excluded.

Most health insurance schemes can be classified into three broad categories, social health insurance, private health insurance and community health insurance. Social health insurance schemes are statutory programmes financed mainly through wage-based contributions and related to level of income. SHI schemes are mandatory for defined categories of workers and their employers (Panda et al., 2013). Community health insurance is any not-for-profit insurance scheme aimed primarily at the informal sector and formed on the basis of a collective pooling of health risks, and in which the members participate in its management (Ibid). Private health insurance it totally different from these two types of insurance since the former is motivated for profit. Social and community based health insurances sometimes collide each other; in some countries an insurance can be called as social though its characteristics were CBHI's. This is to

point that if something is included in this survey about social health insurance; it is a kind of social health insurances having the characteristics of CBHI's.

3.3. Health & Development

The interconnections between health and development are inseparable. Development is the process of improving health and the quality of life, and health is an indispensable component of the development process. Whether referred to as economic development, human development, social development, sustainable development, or some other terminology, development can be measured by its impact on the health (WFPHA, 1996).

Rwandan Ministry of Health (2010) points that improved health is an integral part of any poverty reduction development strategies. Health and poverty are very closely related, as falling ill is one of the biggest risk factors leading to poverty, and, conversely, poverty can be the root of many health problems. Thus, ensuring an adequate standard of health care by setting up a health insurance system which offers coverage against financial, social and health risks connected to diseases constitutes a very important element in the fight against the poverty.

3.4. Health Finance

3.4.1. Budget Allocation

Most developing countries are underfunding health, that is, the level of resources spent is measurably below the level needed. One obvious cause for underfunding is that governments allocate too few dollars to health. However, the amount of tax funds a nation can spend on health is limited by the government's ability to collect tax revenues. Another consideration involves the nation's political economy, which influences how much of the budget is allocated to health services and how much to competing priorities (Hiaso & Shaw, 2007:39). Most developing nations allocate only 6 to 10 percent of their government budgets to health (World Bank 2005, as cited in Hisao &Shaw, 2007:23). While many African nations have signed the Abuja Declaration whereby they pledge to allocate 15 percent of their government budgets to health, few nations have actually achieved this goal (Ibid).

3.4.2. Donors' Dependence

The share of total national health expenditures that comes from donors is high in many Sub-Saharan African nations. These funds are channeled through the government and can account for more than 25 percent of the public health budget. Donor financing raises two issues. First, to what extent are donors driving a nation's health priorities and are donors' priorities compatible with domestic priorities? Second, how stable is donor financing, and will health programs be sustainable if donors withdraw their support? (Hiaso & Shaw, 2007:24).

3.4.3. Health Insurance

The uncertainty of illness underpins the theory of social or community health insurances. Each year a relatively small number of people suffer from serious illness and disability. Their medical problems can result in large medical expenses that most people cannot afford, but faced with life and death decisions, people will tend to seek expensive medical services even though the costs may bankrupt patients and their families. Consequently, most people want to be insured against such risks because they are risk averse (Arrow 1963; Rothschild and Stiglitz 1976, cited in Hsio &Shaw, 2007:28).

Patients' out-of-pocket payments represent a significant portion of health care spending, and these payments are inequitable, placing a greater financial burden on the less healthy and on poor people and deterring patients from seeking necessary health care. Equally important, individual out-of-pocket payments do not pool risks (Ibid).

3.5. Universal Health Coverage: The Ultimate Goal of any Health Financing Strategies

The main drawback in the literature is that while UHC is frequently invoked by health policy makers, academicians, international organizations and even the Medias, it is ambiguous what these policy makers, academicians, international organizations and the media actually mean by the term. Definitions can vary widely. Authors writing about high-income countries refer to 'Universal Health Care', while low-income countries are referred to as having 'Universal Health Coverage' (Stuckler et al., 2010).

There are many broad categories of meaning of UHC: all needed medical services should be available at low or no cost, or to refer to a system that provides or ensures these benefits (Shisana, 1996; Puenpatom and Rosenman 2008), a well functioning, accessible health system, with some financial protections and some basket of services or the existence of a legal mandate for universal access to health services and evidence that suggests the vast majority of the population has meaningful access to these services, Universal coverage was referred to as 100% coverage of the population under the given health plan or as comprehensive health coverage without user fees, the main definition of UHC used by WHO is an access to key promotive, preventive, curative and rehabilitative health interventions for all at an affordable cost, thereby achieving equity in access, (Stuckler et al., 2010) a well functioning, accessible health system, with some financial protections and some basket of services (Bump JB, 2010).

World Health Organization Resolution number 58.33 defined "universal coverage" as needed health service; financial protection; for everyone. The resolution also states that universal health coverage cannot be achieved without a well-functioning health financing system.

In common universal health coverage has an attribute of having a health access for the significant portion of the society (WHO) for some vitally important baskets of health services (Stuckler et al., 2010) without having financial catastrophes (Bump JB, 2010) or with a well functioning health finance system (WHO Resolution number 58.33).

Universal coverage (access to adequate health care for all at an affordable price) incorporates two different coverage dimensions: health care coverage (adequate health care) and population coverage (health care for all) (Carrien G and Jams C, ND).

From all the definitions we can infer that UHC and CBHI are related. Universal health coverage does with accessing peoples for health without having any financial catastrophes for some baskets of health needs. CBHI is adopting by countries for accessing the significant section of health vulnerable societies for a certain types of health needs without any financial burden on the users of the care. For this reason CBHI is one means to UHC, an end.

3.6. Health Inequality between Poor and Non Poor

On the whole, people are healthier, wealthier and live longer today than decades ago. This shows that progress is possible. It can also be accelerated. However, there are other trends that must not be ignored. First, the substantial progress in health over recent decades has been deeply unequal, with convergence towards improved health in a large part of the world, but with a number of countries lagging behind or losing ground. There is a considerable and often growing health inequality within countries (World health report, 2010).

There are many shortcomings of health care delivery. The shortcomings which are importantly related with this proposed study are: Inverse care. People with the most mean consume the most health care, whereas those with the least means and greatest health problems consume the least. Public spending on health services benefits the rich more than the poor. Impoverishing care. Wherever people lack social protection and payment for care is largely out-of-pocket at the point of service, they can be confronted with catastrophic expenses (Ibid).

These require extended access to basic package of health interventions and essential drugs for the poor and transformation and regulation of existing health systems, aiming for universal access and social protection. According to the same report user fees are important source of exclusion from needed care.

3.7. How to Reach the Poor?

A question that remains of paramount importance in a majority of the world's countries is how their health financing systems can provide sufficient financial risk protection to all of the population against the costs of healthcare. A crucial concept in health financing policy towards universal coverage is that of society risk pooling, whereby all individuals and households share the financing of total healthcare costs. The larger the degree of risk pooling in a health financing system, the less people will have to bear the financial consequences of their own health risks, and the more they are likely to have access to the care they need (Carrien G and Jams C, ND).

In low-income countries, private, uninsured, out-of-pocket expenditures on health care make up a larger share of total financial resources than in richer countries (Van der Gaag J, ND) leaving plenty of scope for policy measures to reduce the out-of-pocket share, especially through the

implementation of health insurance. Risk sharing for health care is critical to efforts to alleviate poverty. Morestin F and Riddle V (2009) shows that about 150 million people per year suffer catastrophic financial shocks due to uninsured health care expenditures.

Virtually without exception, country studies show that the poor have less access to all types of health care and benefit less from publicly provided services than do higher-income groups. Thus, health status is universally lower for the poor than for the rich. The quest for health equality is often used as a major argument for heavy government involvement in health care. After more than 25 years of policy failure in this area, evidence suggests that it is time to rethink reliance on government as the sole financier or provider of health care (Van der Gaag J, ND). For example Colombia introduced a comprehensive health insurance scheme in the early 1980s. The overall effect of the introduction of the new system has been more equality in insurance coverage, access to health care, and health outcomes (Ibid).

Financing health care in poor countries that have limited or no growth prospects remains challenging. But health insurance can play a major role here, too. Given the overall limitations of resources, policies to increase access should be designed so as not to crowd out those private resources. Prepaid, low-cost voluntary health insurance provides such a mechanism. It harnesses the existing resources, provides a steady income flow for the providers, and protects participants from financial shocks as a result of illness (Morestin F and Riddle V, 2009).

3.8. CBHI Scheme a New Alternative of Health Finance Strategies for UHC and Reducing Poor and Rich Health Disparity

Exclusive reliance on government financing of health service has become increasingly unbearable; population growth and the emergence of new pathologies, such as HIV, have brought about growing health cost; for this reasons in developing countries public provided health services are deteriorated both in quality and effectiveness (Damene H/mariam, ND).

The aim of alternative health finance strategies is to promote sustainability of the health care financing and improve the quality and coverage of health service; this can be achieved among others with the promotion of community participation (Ibid).

Millions suffer financial ruins when they use health services globally. They either suffers sever financial hardship/ catastrophic health expenditures or pushed into poverty because they must pay out-of-pocket at the time they receive health services. The World health report, 2010, proposes three interrelated health financing strategic options for universal coverage: raise sufficient funds for health/more money for health/, reduce heavy reliance on direct OOP(Out-of pocket)/more equity for health/ and reduce and eliminate insufficient use of resources/more health for health money/. Reducing OOP requires switching to systems of "prepayment" with subsequent "pooling" of revenues (prepayment means paying before illness and it can take the form of insurance, like CBHI)

For the public sector health delivery system, budget allocation by the government is the main source of finance but this is a remote possibility. Universal coverage is difficult to achieve if public financing is less than 5% of GDP (World health report, 2010). Therefore there is the need to look for alternative methods. For example individual private payments are the major source of health care financing in the Ethiopia and in many parts of developing world. Charging user fees can negatively affect the use of health services by the poor (Damene H/mariam, ND)

An ILO study, which compared all available data on access, concluded that based on WHO data, "worldwide, about 1.3 billion people are not in a position to access effective and affordable health care if needed, while 170 million people are forced to spend more than 40 per cent of their household income on medical treatment" (Stuckler et al., 2010).

Hsiao (2003) as cited in Bump JB, (2010) identifies five mechanisms of health system financing: general revenue, social health insurance, private insurance, community financing, and out-of-pocket expenditures. Out-of-pocket expenditures, an ongoing health financing strategy in many parts of the world, can play some role in UHC, but cannot serve as the main financing mechanism because of UHC's commitment to financial protection.

The increasing evidence of adverse affects of user fees persuaded many countries to abolish user fees completely (Uganda, Zambia, South Africa) (Wilkinson, 2001; Burnham, 2004), partly (Burundi, Niger, Lesotho, Ghana) or decrease them substantially (Sudan) (Brikci and Philips 2007 as cited in Barnett I and Bekele T, 2010). Many international campaigns have strongly advocated the dismantling of user fees in recent years and heated and often emotional debates

arose involving policymakers, academics and international organizations (James, 2006; McPake, 2008). Several international donors including the World Bank have begun to acknowledge that user fee policies did not succeed in what they intended to achieve and have offered to support governments in the removal of fees and the search for alternative means of financing healthcare such as community-based health insurance systems (Yates, 2009 as cited in Barnet I and Bekele T, 2010).

Two main reasons for abstaining from seeking care—lack of money and lack of staff or drugs in the services—could be overcome with the establishment of a CHI scheme that on the one hand would remove financial barriers to seeking care and on the other hand would generate substantially more revenue to contribute to staff salaries and the purchase of essential drugs (Eckhardt et al., 2011).

According to the 3rd National Health Account (NHA), in Ethiopia private households provided 31 per cent of the total health expenditure in 2004/5, making them an important financial source for national healthcare. The government covered 31 per cent, donors and NGOs 37 per cent and other private employers and funds 2 per cent (Wamai, 2009). To mobilize new financial resources for healthcare and to protect poor households from impoverishment brought about by covering medical costs for catastrophic illnesses and injuries, the government is currently developing and pilot-testing community-based health insurances schemes with strong support from various donors such as USAID and WHO (Ghebreyesus, 2009; WHO, 2009b; Abt-Associates/USAID, 2010).

In Ethiopia user fees for healthcare seemed to be an important deterrent for many participants who would have liked to attend or were referred to a higher-level health facility (Barnet I and Bekele T, 2010).

According to Barnet I and Bekele T (2010) in the quantitative survey households were asked how they would prefer to pay for healthcare. Around 40 per cent of all households stated that they simply could not afford to pay at all. Other suggested alternatives to pay healthcare user fees included formal health associations or the payment of an annual health tax which is directly resembled with the current CBHI. The same study concludes that user fees can present a substantial psychological burden, especially for poor households in Ethiopia, as its quantitative

survey data and the qualitative interviews showed. People were thereby especially worried about major unexpected illnesses of a family member that would require expensive treatments not planned for in the household budget. User fees were perceived as a financial barrier to healthcare usage, especially by poor households.

Universal coverage, secure access to adequate healthcare for all at an affordable price, is the ultimate objective of any non profitable health insurance schemes (Carrien G and Jams, ND).

However, nowhere in the world are CBHI schemes a complete mechanism for achieving universal health coverage (Stoermer et al., 2012:59).

3.9. Definition and Historical Background of CBHI

3.9.1 Historical Background

Community based health insurance schemes were amongst the first social protection institutions to be established in the industrial market economies. In the Netherlands, mutual health insurance societies were founded by the guilds during the Middle Ages. The Friendly Societies of the United Kingdom, the Mutual Benefit Associations of France, Belgium, Germany, Japan and Korea, and the Fraternal Benefit Societies of Canada were the first institutions in their respective countries to offer health insurance. Over time, the growing political influence of these community-based institutions gave rise to social insurance programs, and ultimately to the spread of more elaborate social protection systems (OECD 2001).

In the developing countries, the concept and implementation of community-based health insurance is of a far more recent origin. In Sub-Saharan Africa, the majority of the CBHI schemes came into existence only in the 1990s. Reflecting a strong Francophone tradition of mutual health associations, CBHI are far more common in West and Central Africa, especially in Senegal, Benin, Burkina Faso, Cameron, Democratic Republic of the Congo, Mali, and Togo, than in other parts of the continent. Senegal has the longest tradition of CBHIs, with several schemes dating back to the early 1980s. In Kenya, Uganda and Ghana, several schemes originated in the 1990s as part of the search of mission hospitals for new sources of funds after experience with levying user fees proved unsatisfactory (Musau, 1999).

Many of Africa individual CBHI schemes are small, with around 100 beneficiaries, while others, such as Tanzania's Community Health Fund, have nationwide coverage with networks that cover one million or more beneficiaries (Ibid). Even though Africa has been a pioneer in CBHI, promotion of these organizations remains largely driven by external organizations. Moreover, coverage of the African CBHIs remains low, at an estimated 8.2 percent of their target population (Waelkens and Criel, 2004 as cited in Tabor RS, 2005).

3.9.2. Definition of CBHI

CBHIs are called by many different names, including: micro-insurance, community health finance organizations, mutual health insurance schemes, pre-payment insurance organizations, voluntary informal sector health insurance, mutual health organizations/ associations, community health finance organizations, and community self-financing health organizations. There is little to distinguish one from another, except that some terms are more commonly used in one part of the world than another (Tabor RS, 2005).

As it is different in name across countries, regions and continents; its content of the package, the way it is initiated, the way it is administered and organized is different. As per researcher observation is concerned and interview with some members of CBHI management committee members representing the community for example Ethiopia's CBHI is truly community based, the community also involved in management in principle but the fact is the involvement of the community in management is cosmetics. This is to mean that Ethiopia's CBHI community based but government operated. Here below some of the theoretical definitions of CBHI surveyed.

A Community-Based Health Insurance Scheme (CBHIs) is any program managed and operated by a community-based organization, other than government or a private for-profit company, that provides risk-pooling to cover the costs (or some part thereof) of health care services. Beneficiaries are associated with, or involved in the management of community-based schemes, at least in the choice of the health services it covers. It is voluntary in nature (Ibid).

Community health insurance (CHI) is defined as 'any not-for-profit insurance scheme that is aimed at primarily at the informal sector and formed on the basis of a collective pooling of health risks' (Panda et al., 2013).

The term "community-based health insurance," refers to the pooling of revenue by the community to share financial risks related to possible health problems in the future and the (co)administration of this tool by the community (Eckhardt et al., 2011).

CBHI is a modern socioeconomic program that promotes equity and creates solidarity. It pools risks and redistributes income between the rich and the poor, the healthy and the less healthy, and the old and the young.

In CBHI citizens agree to pay a certain amount 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. It is a financing approach for mobilizing funds and pooling risks. The newly mobilized funds should be allocated for the poor and near-poor to improve their financial access to health care (Hisao & Shaw, 2007:18). The purpose of a health financing system is; to mobilize resources for the health system, to set the right financial incentives for providers, and to ensure that all individuals have access to effective health care. Other aspects are that individuals should not be impoverished as a result of doing so, nor should they be unable to get care because they cannot pay for it (Panda et al, 2013).

CBHIs can be initiated by health facilities, NGOs, trade unions, local communities, local governments or cooperatives and can be owned and run by any of these organizations (Jutting, 2003).

3.10. Factors Affecting Social or Community Health Insurance Schemes

In recent years, there has been a growing emphasis among international organizations on health insurance as a financing mechanism (Di McIntyre and Luscy Gibson center for health policy, 2005). Health insurance is still relatively limited within Africa. Private voluntary insurance schemes for formal sector workers are mainly concentrated in Southern Africa (particularly South Africa, Zimbabwe and Namibia) but also exist to a more limited extent in some East and West African countries. Experience of these types of schemes has not been entirely positive, with very limited coverage levels, fragmentation of risk pools and rapid, uncontrolled cost spirals threatening their sustainability. For these reasons, limited attention is being paid to expanding this form of health insurance within the African context (Ibid).

Drop-outs, or the failure of clients to renew their insurance, can be astonishingly high for some CBHIs. High rates of drop-out adversely affect the reputation of a CBHI, make it more difficult to manage partnerships with providers, raise marketing costs, and ultimately, can threaten the financial sustainability of the scheme. Even in well-managed, large CBHIs, a drop-out rate of 5-10% per year is not uncommon. There are a number of reasons for high attrition rates, including poor service, changes in price and/or services, lack of effective marketing, and conceptual misunderstanding of insurance. Of the three villages the Cambodia GRET CBHIs 69% of the families participating in the first cycle did not renew in the second. In one village, only one family remained with the program (Bump JB, 2010).

Some of the reasons for high dropout rate included: a large increase in the premium; difficulties in acquiring the money to pay the higher premium in a short time; the timing of the premium acceptance period did not fit with some clients' income inflow cycles; dissatisfaction with the limited coverage; and when premiums rose, clients perceived no additional benefit for the increased cost (McCord, 2001).

While there are certainly considerable potential benefits of such schemes, there is still quite weak empirical evidence on what works and what doesn't. Ekman, 2004 as cited in Di McIntyre and Luscy Gibson center for health policy (2005) highlights that population coverage by these community-based pre-payment schemes has remained relatively low and that the most vulnerable households are not currently incorporated. Thus, most of these schemes have small risk pools and limited cross-subsidies.

There are many ways that CBHIs retain their members. Providing good quality service is surely the most important approach. Fostering group solidarity, through regular meetings and member participation in appointing and supervising CBHI staff, also helps to discourage drop-outs (Tabor RS, 2005).

A successful launch of community based health insurance requires several major preconditions. (A) Incentive for people to pay the premium: People must be motivated to accept and pay for the scheme. For example Tanzania since 1996 has tried to attract and enroll its population into its district-based insurance, the community health funds. The government subsidizes 50 percent of the premium, regardless of income level, yet the enrollment rate remains low, ranging from 5 to

20 percent of the eligible population. (B) Rapid economic growth: rapid economic growth is an important consideration in sustaining a community health insurance program and in expanding it to achieve universal coverage. Health care costs rise rapidly because of inflation, rising expectations, and expensive new drugs and technology. Governments need rising revenues to subsidize the growth in premiums for the poor and to expand coverage. The prevalence of high poverty rate and a high dependency ratio would represent immense challenges to the initiation and scaling up of community health insurances (Hiaso & Shaw, 2007:32).

Moreover, rapid economic growth has positive effects on health insurance enrollment in that it (a) can lift people out of poverty, meaning that more people can afford to pay their premiums; (b) can raise the government's general revenues, meaning 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 (Ibid).

In general the effectiveness of the CBHI is the function of number of factors. Here below some important determinants of CBHI are surveyed in detail.

1. **Level of income and rate of economic growth:** A greater amount of income per capita is apt to increase the capacity of enterprises and citizens to prepay health insurance contributions. In addition, tax revenues are likely to increase with income, facilitating the subsequent channeling of any government subsidies into health insurance. Steady economic growth, therefore, is likely to enhance this capacity to prepay (Ibid).

   Severe poverty can impede the success of a CBHI. If most people are simply struggling to survive, they will be less willing to pay insurance premiums in advance to use services at a latter point in time. Scheduling premium collection at the right time of the year can also help improve access to the poor, especially when their incomes are highly seasonal (Tabor RS, 2005).

   With regards to income, Gumber (2001), Ranson (2001) and Chankova et al., (2008) examined uptake by dividing households into income quintiles; they consistently found

that income was a significant positive determinant only among the highest and lowest quintiles.

Mali where only the highest income group was more likely to enroll, but all other income groups were equal in terms of enrollment (Eckhardt et al., 2011).

Households with higher socio-economic status are in a good position to afford (paying premium) or may have better understanding of the benefits of being insured. Poor have liquidity constraints that cause them to remain uninsured even when they may be better off with insurance (Panda et al., 2013).

The widely held view that low GDP is the main barrier to achieving UHC is likely to be a consequence of poor countries having one or more of the following characteristics: weak tax-collection capacity; and insufficient human and physical resources to deliver effective health care. Thus, poverty per se is likely to be an obstacle to UHC mainly to the extent that it is associated with the lack of a well functioning state and health system (Bump JB, 2010).

Jutting, Johannes (2003) found that the poorer segment of the population is represented to a lesser extent than people with an average or high income. Poor nonmember was interested in joining the scheme but have no financial means to pay the required insurance premium.

2. **Structure of the economy:** Many developing countries do have important agricultural sector where a notable part of employment is informal. Such countries then are likely to face administrative difficulties in assessing incomes and collecting contributions because so many workers do not receive a formal salary. This may hamper provision of health protection for the informal segment of the population, especially when a health insurance scheme would rely significantly on household contributions (Ibid). A health insurance scheme addressing a large population with an agricultural base usually faces problems regarding the enrolment and administration of members. In the agricultural and informal urban sectors there is no formal payroll system to serve as the basis for membership enrolment and premium collection (Stoermer et al., 2012).

3. **Distribution of the population:** The population in urban areas, where there is likely to be at least a minimum quality of infrastructure and communications, and high population density, is likely to be easier to serve with a health insurance system than a widely dispersed rural population (Ibid).

4. **Administrative conditions:** The establishment of health insurance scheme requires a sufficiently skilled labour force with capacities in bookkeeping, banking and information processing (Ibid). Implementation problems are also mentioned in a report from the Ministry of Health in Tanzania that discusses experiences with community health insurance schemes in Ghana, Tanzania, Uganda, and Zanzibar (Van der Gaag J, ND). Study by Sinha et al.(2005) also talked about supply-side barriers relate to schemes' design and management (for example, lack of clarity among scheme staff regarding the scheme's rules and processes, and requirements that claimants submit documents to prove the validity of their claims) to accessing benefits in a community-based insurance scheme which affect take-up decision in the scheme.

   Institutional factors such as the technical arrangements made by the scheme management also influence people perception about the benefit of the scheme. Scheme related factors such as benefit package, design, premium and transparency also affects people's decision to enroll (Panda et al., 2013).

5. **Degree of Solidarity:** The other factor is the level of solidarity within a society. A society with a higher level of solidarity is interpreted here as being one where individuals are more willing to support other individuals. A system of full financial protection requires a significant amount of cross-subsidization, both from rich to poor and from low risks to high risks (Carrien G and Jams C, ND).

   Panda et al. (2013) consider solidarity as social capital. Social capital is also important in the CBHI context. Informal trust-building factors are equally or more important in explaining demand for insurance. Trust in insurance can relate to trust in the insurer or trust in the specific insurance product. If there is solidarity in the community or trust in management, it will positively influence individuals' decision to enroll in CBHI.

6. **Level of education:** Less formal education (less than 6 years of schooling) was significantly related to a greater willingness to join. This is in contrast to experiences from other study sites, where a greater willingness to pay was reported for interviewees with more formal education (Eckhardt et al., 2011).

   In a developing country context, education levels may be an important determinant of uptake as insurance may be a new concept. Sinha et al (2006) and Ito and Kono (2010) show that the level of understanding among the target members (which might be related to education) of insurance schemes have positive significant effect on uptake rates. Schneider and Diop (2001) and Chankova et al. (2008) find that households headed by persons with formal education are more likely to join insurance than others.

   The decision to insure may be complicated for individuals particularly in areas where insurance is a new concept and illiteracy rates are high.

7. **Awareness:** Many low income clients are unfamiliar with the concept of insurance and they have a hard time distinguishing credit from insurance. Drop-out rates can be very high in cases where individuals feel that the benefits should correspond to the contributions they have made (i.e. a savings concept) (Tabor RS, 2005). Clients must fully understand what they are buying before premiums are paid if they are to be expected to renew their coverage. Research has shown that when clients do not understand what they are buying, they will perceive that they are not getting their money's worth because they were unable to access the health care that they expected (McCord, 2001).

8. **Moral Hazard:** Moral hazard is defined as the possibility that people will act differently with insurance than without. As insurance lowers the price of care at the point of use and removes barriers to access, demand for the utilization of facilities will increase. There are many examples of insurance schemes that have quickly gone bankrupt because they failed to develop adequate protections against moral hazard (Tabor RS, 2003).

   In order to reduce moral hazard, all of the schemes have introduced copayments for services in their benefit packages, ranging from 10 to 80 per cent of the price of the service. Lamahi increased its benefit package and reduced the premium to counteract a sharp decrease in enrolment after the introduction of the Free Health Care programme. Katari and Dumkauli reduced their co-payment fees. Tikapur, Dumkauli, Mangalabare

and Katari introduced discount rates for members renewing their enrolment (Stoermer et al., 2012).

9. **Adverse selection:** Adverse selection occurs when people with a high probability of "health loss" choose to buy insurance more than others, while those with low probability of loss do not join (Tabor RS, 2005). Expected utility theory assumes that people are risk averse implying that the more risk averse individuals are, the more insurance coverage they will buy. But this theory is silent about the association between households' socio-economic status and insurance enrolment (Panda et al., 2013).

   This results in a higher insurance premium, which discourages those who anticipate needing less treatment than others from joining (Tabor RS, 2005). Msuya et al. (2004) states that the focus of CBHI uptake decisions to be at household level, and this demand for insurance is framed in the expected utility theory, in which perceptions of the magnitude and probability of risks weigh heavily on insurance uptake decisions. Thornton (2009) as cited in Panda et al (2013) finds that in Nicaragua, both the health status of household members (specifically, whether the head of household is chronically ill), and the probability of future health events occurring (e.g. the number of children in the household) are significantly and positively associated with uptake of health insurance. In a WHO Study (Carrin, 2003) almost half of the schemes surveyed had the family as the unit of membership, a measure introduced to avoid the problem of adverse selection.

10. **Weak health system:** Increasingly, there is recognition that one source of the problem is the weak capacity of health systems in low-income countries. No amount of money can provide effective care when health systems lack functioning infrastructure required to deliver quality healthcare.

    Such health system resources include a sufficient number of doctors, nurses, and community health workers, who have access to reliable supplies of medicines and surgical equipment and logistical routes of providing care (involving roads and delivery networks, reliable electricity, and sufficient and adequately equipped physical facilities to meet local needs). Absent these essentials for point-of-entry primary healthcare delivery, it is very difficult for health policymakers and practicing healthcare workers to build a functioning system or implement change effectively (Stoermer et al., 2012).

Supply-side factors such as availability and access to good quality primary and secondary health care facilities in the area may attract more members to enroll in the scheme (Panda et al., 2013). The case study in rural Senegal shows that the successful introduction and development of CBHI insurance schemes depends on a set of factors. One crucial aspect to be looked at is, if there is a viable health care provider who can and is willing to support the schemes.

11. **Size of the family:** In the Rwandan Project Study, large households with more than five members had a greater probability to enroll in the CBHI schemes than others (Schneider and Diop, 2001 as cited in Panda et al., 2013). The explanation given is that contributions were kept flat, irrespective of household size up to seven members. Thus the average contribution per household member was therefore less than for smaller families inducing greater enrolment.

Msuya et al. (2004) and Bendig and Arun (2011) as cited in Panda et al.(2013) find that uptake of micro insurance is positively related to household income and size. This is consistent with rational decision making behavior of the households since the amount of contribution is independent of the family size.

3.11. Under Representation of the Poor in CBHI Schemes in Africa

Health insurance is among the solutions promoted in developing countries since the 1990s to improve access to health care services because it avoids direct payment of fees by patients and spreads the financial risk among all the insured. Many mutual health insurance organizations have been developed in Sub-Saharan Africa, and over the past several years some African countries have set up national health insurance systems. However, in those countries that elect to give an important role to health insurance, it remains to be verified whether such insurance really reaches those who are most vulnerable in terms of access to services: the poor. In fact, lack of funds creates problems at two levels: when it comes time to pay the premium, and when the insured need to use health care services (Morestine F and Ridde V, 2009:1).

Though CBHI is identified as pro-poor since it strengthen the demand for health care in poor rural areas, and enable low-income communities to articulate their own healthcare needs (Tabor RS, 2005). In Africa, when health insurance programs do not make specific efforts to facilitate

membership for the poor, they are under-represented among the insured. In Senegal, 31% of households in the wealthiest quintile are insured, in contrast to 8% in the poorest quintile. In Burkina Faso's Nouna district, in 2004, only 11% of the insured were in the poorest quartile (if the poor were insured as much as the others, they would represent 25% of the insured) (Morestine F and Ridde V, 2009: 2).

3.12. Reason for Underrepresentation of the poor in CBHI Schemes in Africa

3.12.1. Difficulties in Paying the Premium

To enroll in an insurance program requires paying a premium. The combined premiums constitute the funds upon which the insurance draws in order to compensate members who use insured health care services. However, the lack of money to pay the premium is the main reason why some people, especially the poor, do not become insured, as shown by surveys in Burkina Faso's Nouna district; in the district of Kissidougou in Guinea-Conakry; in the region of Thiès in Senegal; in the district of Nkoranza in Ghana; in Burundi; and in Uganda (Ibid).

3.12.2. Payment Modalities

Payment modalities can also present problems. If the annual premium must be paid in a lump sum (instead of payments spread out over the year), households find it more difficult to pay. In Burkina Faso, the households surveyed emphasized that a single payment is even more problematic in rural areas, where it is hard to obtain credit. Another element is the time at which the payment is due, because the incomes of workers in the informal or agricultural sectors vary over the course of a year. In Ghana, households in Nkoranza complained that the premium is due at a time of year when their financial situation is poor. In Rwanda, the premium must be paid at the start of the civil year, when families also have to pay school fees (Morestine F and Ridde, 2009: 2).

3.13. How to Promote Membership Among the Poor?

Another important question is the ability of the CBHI insurance schemes to attract members and also to reach the chronic poor within the region of coverage. Debated options to increase membership are the introduction of well-targeted subsidies, flexibility in the payment procedure

of the premium, and the strengthening of the management capacity of the organizations running the health insurance schemes (Jutting, Johannes, 2003). There are many measures to promote health insurance membership among the poor:

1. Subsidy

The poor cannot afford premium payments, thus the government has to fully subsidize the poor and partially subsidize the near-poor. All nations have provided a government subsidy to the poor for their premiums when they established universal health insurance plans. In low income countries, the poor and the near-poor account for a large share of the total population, it is more than two third of the total population. Subsidizing more than one-third of the population requires a huge budget. Consequently, developing countries design their health insurance systems to gradually phase in the poor, in the hope that their economies will grow over time and fewer people will need to be subsidized (Hiaso & Shaw, 2007: 38).

In order to target the subsidy to the poor, countries must first define who is poor and near-poor and then find a way to identify them fairly and accurately. Identifying the poor usually requires an income test, and accurate assessment of those who are eligible for the subsidy entails complex procedures and detailed income data (Ibid).

The government apart from subsidizing poor and near-poor population, non-poor self employed shall also be included under government subsidy. Their household income is above the poverty line and they should pay the premium. While such people are not poor, they are likely to be less able to pay for health insurance because their incomes are lower, on average, than those of formal sector employees. Often the government has to subsidize these non poor to provide the incentive for them to enroll, which means that the government must commit a substantial amount to subsidize non formal sector workers and their families for health insurance to become universal (Hiaso & Shaw, 2007: 39). Subsidizing CBHI's can take two forms, it can be fully subsidized or partially.

a. Premium subsidized 100%

In Rwanda, when the first health mutuals appeared in 1999, there were local initiatives to pay premiums for the indigent by certain churches or by the other insured members. In the following

years, funding agencies began to intervene. For example, in one commune, the German cooperation agency gave the poorest households $32 US, of which $7.9 US corresponded at that time to the annual premium for a household, and the rest was to buy cattle to produce income to pay the premium in subsequent years (Morestine F and Ridde V, 2009: 3). In 2006, subsidizing the premiums of the indigent became national policy. The premiums (about $3.6 US per person per year) were funded by the Rwandan government with the help of funding agencies, notably the Global Fund to Fight AIDS, Tuberculosis and Malaria, that provided around $30 million US over five years. Part of the funding went directly to the mutuals (insurance for primary care services); and the rest, to the district (common funds for hospital services).

The number of indigent beneficiaries increased dramatically, going from 45,000 in 2005 to around 1.8 million in 2006 (of which 800,000 were supported by the Global Fund), i.e., 20% of Rwanda's population (Ibid).

In Ghana, the law on national health insurance exempts the poorest from paying the premium. However, the proportion of the poorest among the insured decreased, going from 30% in 2005 to 1.8% in 2006. One explanation that has been suggested is that the central government does not transfer enough financial resources to cover their premiums (Ibid).

b. Premium partially subsidized

In Nouna district in Burkina Faso, in response to the under-representation of the poor among the insured, a subsidy of 50% of the premium for the poorest households was instituted in 2007. This affects the 20% of households that are the poorest, as defined by the community. These households can thus insure themselves by paying only the remaining 50%, i.e., $1.14 US per adult and $0.47 US per child for the year. By the end of the first year, 186 of the 1,666 eligible households (i.e. 11.1% of them) were insured, as opposed to 18 (1.1%) in the year prior to the subsidy (Ibid).

In Ghana, before the implementation of national health insurance, a project of the International Labour Office with the mutual in Dangme West consisted of paying 75% of the premiums for the poor, who could then obtain coverage by paying the remaining 25%. The subsidy also paid for the identification photo required for the insurance card, because households refused to pay this

additional cost. At the end of the first year of the project, 700 of the 1,622 eligible households were insured (i.e., 43%) (Ibid).

2. Premium varies based on income

The Gonosasthya Kendra (GK) Insurance of Bangladesh offers four different levels of membership for the same insured services: indigent, poor, middle class and well-off. This insurance succeeds in including the very poor, since 80% of indigents are insured. But it does not adequately look after the poor, nor the more modest minority that constitutes the "middle class", as defined by this insurance; many of them do not enroll because of the cost of premiums (Ibid).

System of stratification by dividing members into 3 categories based on Ubudehe (Ubudehe is a community-based targeting mechanism that categorizes the Rwandan population according to their revenues and vulnerability) criteria. The lowest contribution group will comprise the first and second Ubudehe category. The middle contribution group will consist of the third and fourth Ubudehe category, and the highest contribution group will consist of the fifth and sixth Ubudehe category. For CBHI contribution group 1, an annual premium of RWF 2000 will be paid. As this group is comprised of the most vulnerable and poor, it is envisaged that their contributions will be paid by a third party, either the government of Rwanda or development partners. Contribution group 2 will be expected to pay RWF 3000, and group 3 will pay RWF 7000 (MoHR, 2010).

3. Premium paid in kind or work

Small farm workers live in a local economy that often is not very money-based. Thus, some insurances in India have accepted to have premiums paid in the form of rice or sorghum; one of them employed a worker once a year, at harvest time, to collect the households' payments and sell them at the market. Another possibility is to pay the premium by giving work time to the insurance. Goalpara Insurance in India adopted payment in the form of work. A survey in Ethiopia showed that, the poorer the households were, the more they were interested in paying their premium with work, and that the "amount" they agree to give as work was higher than what they were prepared to pay in money (Morestine F and Ridde, 2009).

This strategy is not directed at households who are permanently without money, but rather to those who are moderately poor and able to pay the premium, although not all at once (Ibid).

4. Loans to help pay the premium

The mutuals signed agreements with credit cooperatives so that the latter would make loans in the amount of the annual premium. Under this system, membership in the mutuals in Gakoma, Ruanda, district went from 18% in 2000 to 63% in 2003; 61% of the insured at that time took out loans to pay their premium (Ibid).

5. Dividing the premium in to smaller payments

A survey of the members of a Ugandan mutual revealed that spreading their premium payments over the year greatly facilitated their membership. Another study showed that the level of household wealth had more influence on insurance membership in Ghana, where the mutual being studied collected the premium in a lump sum, and less influence in Senegal and Mali, where payments were spread over the year (Ibid).

6. Payment of the premium at harvest time

This is also the other payment modality to reach the poor. But non empirical support is found. According to CBHI coordinator at South Achefer woreda the premium is due between January 8 and February 28.

3.14. The Role of Health Insurances

There are several ways in which health insurance can improve the financing of health care. First, it can generate more money for health, since consumers may be more able to pay regular premiums than to pay large amounts when they fall ill. Second, it can contribute to greater value for health spending, since insurers can use bargaining power to demand better performance for their funding. Third, it can be an efficient way of allocating limited household resources for high-cost health events (Tabor RS, 2005).

Jutting J (2003) tries to analyze about the deference between members and non members in an access for health care. He argues that members of a mutual have better access and lower financial burden of health care than to nonmembers. He further argued that membership to the CBHI has a positive coefficient for the demand for health care and a negative one for the effect on expenditure.

Health insurance scheme has been set up and that some people are willing to test the new financing option and demand health insurance, that is, they decide to pay the premium and become members for one year. Financial barriers to access are removed for them by the insurance. In the mid- to long-term, the positive experience of some households or community members with health insurance in terms of immediate access to care and benefits for their health may create trust in the new institution. It also encourages people to prolong their membership and convince others to join the scheme. Therefore, the demand for health insurance increases (Atim et al., 1998).

Of all interviewees, 92.2% stated they would go more often to the local health facility if they were covered by a CHI scheme. A higher utilization rate with CBHI affiliation is in line with CBHI study results from Mali, Burkina Faso, and India (Eckhardt et al., 2011).

Preker et al. (2002) concluded that there is good evidence that community financing arrangements lead to better access to drugs, primary care, and even hospital care, but they also found that many schemes have difficulties in raising sufficient resources.

Wagstaff et al. (2007) found that the introduction of a heavily subsidized voluntary health insurance scheme in rural China did increase outpatient and inpatient utilization by 20 to 30 percent.

Two main reasons for abstaining from seeking care—lack of money and lack of staff or drugs in the services—could be overcome with the establishment of a CBHI scheme that on the one hand would remove financial barriers to seeking care and on the other hand would generate substantially more revenue to contribute to staff salaries and the purchase of essential drugs (Eckhardt et al. 2011).

The survey in Nepal found that the overall utilization rate of health services among members of a CBHI scheme is higher than among non-members, regardless of whether it is a public or a private scheme. The health service utilization rate for CBHI members in public schemes ranged from 1.1 in Katari to 9.9 in Dumkauli, with an average of 7.1 across the four schemes. (Stoermer etal., 2012: 40).

The main strengths of CBHI schemes are the extent of outreach penetration achieved through community participation, their contribution to financial protection against illness, and increase in access to health care by low-income rural and informal sector workers (Preker 2004 as cited in Tabor RS, 2005).

Where CBHI's have been successfully introduced, they have reduced the amount that poor people pay in out-of-pocket payments when they seek care and they have contributed to more frequent utilization of health services. There is ample evidence that prepayment and risk sharing through community involvement in health care financing—no matter how small—increases access by poor populations to basic health services and protects them to a limited extent against the impoverishing effects of illness. Members of CBHIs are less likely to need to borrow of sell assets to cover health costs (Preker et al., 2004).

This increased demand for health insurance has an impact on providers of health delivery. The community based health insurance can mobilize additional resources for health care provision. A part of these resources could then be used up to expand access. Under the assumption that there is net revenue generation in spite of higher utilization rates, the hospitals or health facilities will utilize the financial means to improve the quality of care—for example, by increasing drug availability and purchasing extra necessary medical equipment. Better quality of care will increase people's expectations of getting value for money in the case of illness, and will again enhance demand for insurance (Atim et al., 1998).

Community-financing through pre-payment and risk-sharing reduce financial barriers to health care, as is demonstrated by higher utilization but lower out-of-pocket expenditure. In addition, it shows that risk pooling and prepayment, no matter how small-scaled, can improve financial protection for the poor (Jutting J, 2003).

3.15. Rich and Poor Health Care Demand Disparity in Ethiopia

Public and private health services are used equally, but mainly by wealthier groups. Data from 2000 show that Ethiopian households seek care is about 41 percent of illness cases. While the poor to rich ratio for incidence of illness is 1.0, the poor/rich ratio for seeking care is 0.68. Nearly 45 percent sought care in a public facility, while the rest sought care from a private

facility. Except for the richest quintile, health stations and clinics seem to be the main providers of care, followed by health centers. Both public and private hospitals are frequented more often by the richest quintile of households. Households in the poorest quintile are more likely to use public clinics, pharmacies and other trained private providers instead of public hospitals (World Bank, Africa Regional Development, and MoHE, 2004).

This is due to price differential between hospitals and other lower health posts. The price of health care is highest in public hospitals and lowest in health posts. Pricing in public facilities seem progressive but low prices may also represent differentials in the quality of care provided (Ibid).

This shows the problem of inverse care is apparent in Ethiopia. This is to mean that people with the most mean consume the most health care, whereas those with the least means and greatest health problems consume the least. Public spending on health services benefits the rich more than the poor (World health report, 2010).

3.16. Common Health Care Delivery Problems in Ethiopia

Clients have expressed satisfaction with NGO and private health facilities and public ones but a higher percentage find the care they receive from public facilities to be below average. In 2001, about 52 percent of respondents perceived the quality of care they received as good. However, about 30 percent of households who visited a government facility consider the quality of care they received to be below average (World Bank, Africa Regional Development, and MoHE, 2004).

The main reasons cited for dissatisfaction with the quality of care obtained from public health care facilities are the following: (a) insufficient availability of drug; (b) inadequate skills/knowledge and courtesy of health personnel; (c) inconvenience of lengthy procedures; (d) inadequate availability of diagnostic facilities; and(e) lengthy waiting time. The average travel time was almost 3 hours; waiting time between arrival and being seen was also quite high averaging 7 hours at government hospital outpatient departments, 6.2 percent at NGO facilities and 2.7 percent in other private facilities. The consistent and sufficient availability of drugs were considered an important indicator of service quality. About 37% of households who visited

public health facilities were dissatisfied because drugs were not consistently available (MOH, 2001).

3.16.1. Distance Barrier

Geographical access to health-care services remains one of the lowest in the world, particularly for clinical care. The average distance to the nearest health facility was 7.7 kilometers in 2000. Seventy percent of households however reside less than 10 km away from a health facility while only about 40 percent of households have access to formal clinical care at less than 5 km or one hour's walk, the usual standard to measure access. More than 90 percent of households travel on foot, even when the facility is further than 10 kms. Regional differentials are also very large, with distances as low as 1.3 kms in Addis and as far as 9.8 kms in Afar. The differential between income quintile is however less marked although, on average, poorest groups live further away from a health facility than richer groups (World Bank, Africa Regional Development, and MoHE, 2004).

Despite the increase in the number of facilities, geographical access to health services in Ethiopia remains one of the lowest in the world. Large rural to urban differentials exist with the nearest health facility providing curative care being 1.4 kms in urban areas and 8.8 kms in rural areas in 2000. The international standard for access to clinical/curative services is a distance of 5 km (Ibid).

Urban households have a significant advantage in terms of geographic access to health facilities. Residence affects outcomes most while income affects demand for services most. Urban households have a significant advantage in terms of geographic access to health facilities. Residence affects outcomes most while income affects demand for services most (Ibid).

3.16.2. Insufficient Human Resource Base

The human resource base is very limited. The human resource base supporting health services is very limited. Ethiopia has one of the lowest ratios of doctors to population in the world. The ratio of nurses to population is slightly more favorable but this number includes large numbers of "junior" or "assistant" nurses with only one year's training. As many health staff operates in urban areas, rural areas face a continuous shortage of human resources. In the three largest

regions (Oromia, Amhara and SNNPR), less than one doctor is available per 55, 000 people and one nurse per 10,000 people (Ibid).

3.16.3. Drug Unavailability

Drug availability is a key determinant in the public's view of the usefulness of health facilities. Improving drug availability is important not only for its role in better treatment, but also, because unavailability of drugs is the major factor behind low utilization rates of lower tier facilities. (World Bank, Africa Regional Development, and MoHE, 2004). The consistent and sufficient availability of drugs were considered an important indicator of service quality. About 37% of households who visited public health facilities were dissatisfied because drugs were not consistently available (MOHE, 2001). In general, it appears that availability of essential drugs has improved, but that shortages of drugs are still common (World Bank, Africa Regional Development, and MoHE, 2004).

3.16.4. Weak Health Care Delivery

Increasingly, there is recognition that one source of the problem is the weak capacity of health systems in low-income countries. No amount of money can provide effective care when health systems lack functioning infrastructure required to deliver quality healthcare. Such health system resources include a sufficient number of doctors, nurses, and community health workers, who have access to reliable supplies of medicines and surgical equipment and logistical routes of providing care (involving roads and delivery networks, reliable electricity, and sufficient and adequately equipped physical facilities to meet local needs). Absent these essentials for point-of-entry primary healthcare delivery, it is very difficult for health policymakers and practicing healthcare workers to build a functioning system or implement change effectively (Stuckler et al., 2010).

3.17. Health Service Delivery in South Achefer

The rural health centers patient visit is low mainly associated with the poor service they got. People go to them if and only if they face an acute illness and/or accidents. When one ask people why they do not visit the nearby health center, they mostly raise issues of poor quality health service (ARS, 2011).

The health centers except Durbete are not well functioning. Among the different reasons raised for such weakness lack of required manpower, medical equipments, drugs and reagents, office furniture and equipments, water supply, electric power and lack of appropriate and sufficient buildings (severe at Zibist) are some to mention (Ibid).

Taking the RHB BPR as a basis for the size of staff that should exist, the number of technical staff in south Achefer should be 18 HO, 21 mid wives, 92 nurses, 8 environmental health Workers, 23 laboratory technicians and 22 pharmacy technicians (Ibid).

Similarly the RHB BPR suggest technical staff per an urban health center to be 3 HO, 3 midwives, 20 nurses, 2 environmental health workers, 5 laboratory technicians and 4 pharmacy technicians. Nevertheless Durbete has 3 HO out of 3, 2 midwives out of 3, 9 nurses out of 20, 1 environmental health worker out of 2, 3 lab technicians and technologist out of 5, and 2 pharmacy technicians out of 4 (Ibid).

3.18. Conceptual Framework

Scholars argue that for the effective implementation of CBHI countries shall not have free health services for the community. If the country has such free health services for the community, then these community members may not become a member for health insurances that have a monthly fee. Considering the above conceptual explanations factors that affect the community based health insurance, it is arguably essential to identify factors that affect enrolment in to the program and out of the program, health finance and health service accessibility as a conceptual framework. Accordingly, enrolment in to and dropout from the CBHI is a factor households capability to pay the fee, governments willingness to sponsor households that do not able to pay the fee, educational background of family leader, family size, income level, benefit packages, and administrative complexity; financial viability of the program is a function of the amount of premium collected, government grant and inflation; premium collected is in turn a function of enrolment and dropout; health service accessibility if the function of financial viability of the program and the amount of money collected from members; health service accessibility, technical efficiency of physicians, composition of man power and equipment availability and all these factors ultimately will affect the health development of the country .

The assessment focus on several demand and supply-side factors (for example household income, awareness about insurance, schemes' design and management etc.) affecting take up of voluntary and community-health insurance in Ethiopia.

Numerous factors can explain households' insurance enrolment decisions. The factors that enable or impede individuals from enrolling can be categorized into five broad heads namely households or individual characteristics, scheme related factors, social capital, supply-side factors and institutional factors (Panda et al., 2013).

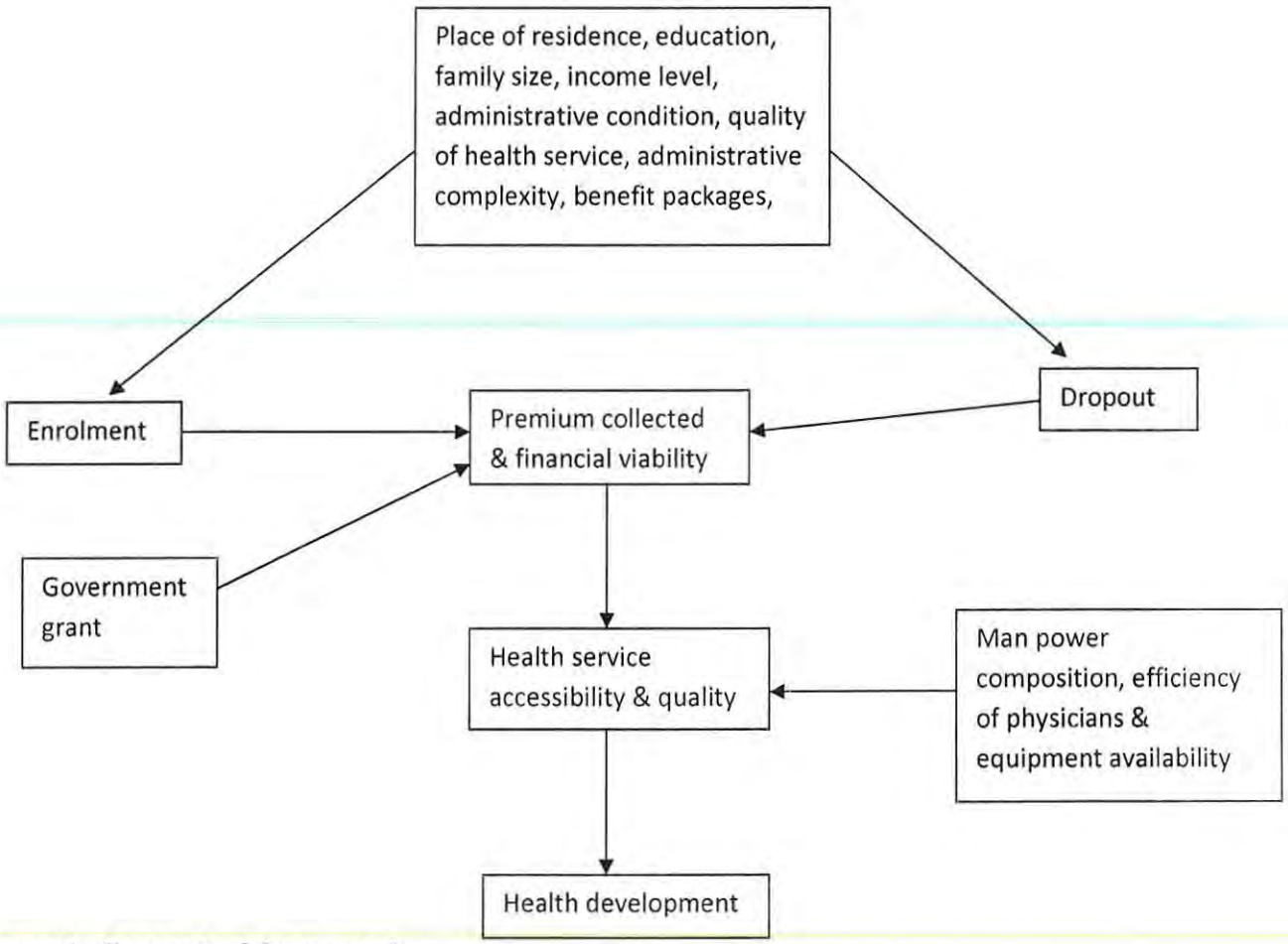

Figure 1: Conceptual framework

Source: Researchers own construction

This conceptual framework depicts that the insurance intake decision of the households is determined by the place of residence, education, gender, family size, net annual income of the household leader, the availability of chronically sick individual within the family, administrative complexity of the program, the efficiency of the health centers at South Achefer Woreda and the health benefit packages of the program. The high or low enrolment of households affect the amount of premium collected from the program which possibly makes the scheme sustainable as the financing option for health services to the society and possibly affect the amount of money goes to make health centers accessible for the significant sections of the society. All these ultimately affect the health development of the country either favorably or unfavorably.

CHAPTER FOUR

4.1. Data Presentation and Analysis

4.2. Introduction

In 2008 the Ethiopian Federal Council of Ministers approved alternate strategy of community financing based on pre-payment and on risk pooling, such as health insurance have proven to be strong options, reconciling an improvement in the financial accessibility to health care, to increase the individual health service expenditure and the necessity to mobilize the internal resources necessary to ensure the financial viability of health services.

The main reasons driving the setting up community health financing arrangements in Ethiopia are the limited financial capacity of governments to provide adequate and affordable health care services and extend formal health insurance for lower income groups and the catastrophic nature of OOP healthcare expenditures.

The CBHI program at South Achefer woreda was started on July 8, 2010. Enrolment in CBHI is voluntary. Usually, enrolment is possible only once a year from January 8 to February 28, followed by two months waiting period (during which claims cannot be made or the enrollees are not entitled to receive CBHI benefits). This period is identified purposively and supported by members of the program because it is the harvest season for the significant number of the members of the program whom occupied with farming.

During the enrolment period, the woreda CBHI coordination office mobilizes kebele administrators and their supporting staff and health extension workers to disseminate information for households to extend their membership and other non members to become a member of the program. CBHI scheme enter into a written contract with the enrolled household, which receives a membership ID card containing the photographs of all enrolled members in the household valid for one year. At the end of the year, the household has to renew the membership if it wishes to continue with the insurance.

To limit adverse selection the unit of enrolment is set as a household. Although the unit of enrolment is the household, the annual premium is set on an individual basis. According to the CBHI coordinator of the woreda, at the start of the program at South Achefer on 2010 till 2013

the amount of payment was determined by the number of individual that a certain family have. During these periods each single individual was obligated to pay 3 ETB per month or 36 ETB per year to be a member of the program. In these periods a single individual within a family was not entitled to be a member of the program.

But this payment modality was changed on 2014. The program has set the maximum family size as five members with 144 ETB. A family with more than five members has to pay an additional premium 24 ETB for each additional member. This was done, according to the woreda CBHI coordinator, to tackle adverse selection and to make health accessible for all and on the other hand to deal with the continuous complain by the household leaders as the payment is too high. An individual with in a family aged 18 cannot be a member of the program under his/her families no matter he/she is economically dependent on his/her families. This exclusion criteria is not applicable if an individual is disabled both mentally and physically and not able to work and support his/her self.

Even though the unit of enrolment was restricted to a household to limit adverse selection, this rule was not strictly followed and enforced. During the period of the survey the researcher found the instances when some members in the household enrolled while others did not or there were partially enrolled households.

The program was also having a written contract with all health centers located in the woreda and with one public referral hospital, Felege Hiwot Referal Hospital, at Bahir Dar. The schemes directly reimburse the cost of treatment of the insured patients to the health care provider on the basis of regular invoices. The CBHI pays the facility the same price as noninsured patients; there is no special pricing/discount for CBHI schemes.

4.3. Basic Principles of the Program

The program is governed by seven basic principles. (1) Inclusive: because the scheme was designed priorily to increase the health access of the community living without regular monthly salary both at rural and urban areas; as much as it possible the scheme must able to enroll the significant portion of the community. (2) Accessibility: the scheme was believed to be accessible for the community from both geographic and financial point of view. Financially the monthly fees must consider the economic capacity of the members of the community. Geographically the

offices of the scheme should be opened close to the community served by the program. (3) Clear and easy: all the functions of the scheme should be designed in the way which is clear and easily understandable for members of the insurance. Its written agreements and documents should not be complicated. (4) Sustainability: for the reason that the program is designed for indefinite periods of time, the scheme shall be sustainable both organizationally and financially. In order to assure the financial viability of the program in addition to the premium collected from the members of the program, there shall be an attempt to get grant or aid from any organizations. To make its organization strong enough the government shall fulfill its man power compositions, working places and equipments and allow the program to function in the existing kebele and woreda functional lines. (5) Coordination: the program was designed in the way to increase financial and administrative coordination between all tier of the government and the community at large. Financially the federal, regional and woreda governments were coordinated to support the scheme; administratively both the community and the woreda government were tightened. (6) Societal solidarity: this scheme was designed to enhance the solidarity among members of the community. Solidarity between the well off and the poor and the sick and the healthy is vital for the sustenance of the scheme. (7) Not for profit: the scheme was designed to be owned by its members and it was not organized to seek profit.

4.4. Subsidy of the Program

There is the national policy to subsidize the poor and the non poor whom the member of the program. To this end there are two kinds of subsidies. The Ethiopian Ministry of Health provides annual block grants to public schemes to subsidize and to cover part of (25%) the program's running costs. The first is the general subsidy given by the Federal Ministry of Health for the whole members of the scheme because the premium collected from members are believed to be small to finance the payment to health centers. This subsidy is given to compensate such shortcoming which is determined by the number of individuals that the scheme has per a year. The amount of subsidy will vary year by year depending on the decrease or the increase of members to the program.

The other kind of subsidy given to the program is the joint subsidy made by both the regional government and woreda administration in collaboration to finance the indigents. The regional government and the woreda administration provide annual block grants to the schemes to fully

subsidize premiums of disadvantaged populations. This subsidy is given by these two tires of the government to finance the households living in absolute poverty and selected by the local community as the poorest of the poor for their membership for the scheme. The 90% these subsidies come from the regional government and the remaining 10% by the woreda administration.

Year	Federal Government (Subsidy)	Regional Government (Subsidy)	Woreda Administration (Subsidy)	Premium collected from members	Total
2011/12	391,505.63	289,573	64,434	1,236,490	1,982,002.63
2012/13	725,040	345,837.60	58,839	1,368,482	2,498,198.6

Table 1: Financial Conditions of the Scheme at South Achefer Woreda for 2011- 2013

Source: South Achefer woreda CBHI coordination office

There is no consistency for the amount of subsidy provided by the Federal Minsitry of Health, Regional government and the woreda administration each year. The subsidy given by the Federal ministry of health is determined by the amount of individual enrolled into and drops out from the program. The subsidy provided by the regional government and the woreda administration determined by the amount of quota for whom designed to have the status of 'poorst of the poor' and the number of individuals used this status.

4.5. Indigent Selection

Ensuring equity in enrollment through identification of and premium exemptions for individuals and groups without adequate financial resources to pay referred to as indigents or the "poorest of the poor", is one of the stated goals of the Ethiopian CBHI.

The identification and selection of the poorest of the poor is participatory. Local communities participate in the definition and selection process, with adequate and locally-defined criteria for poverty.

Poverty is a concept that is not easily defined and measured. Identifying poor for any social intervention are usually challenging with regard to accurately targeting eligible beneficiaries on the basis of poverty. The quantitative means testing approach, related to a more positivist

knowledge paradigm has been used to determine poverty levels based on identified income or consumption expenditures. The challenge here in this approach according to kebele administrators is the unavailability of clearly identified and known income or consumption expenditure. The potential income of rural households might be guessed with the consideration of the size of the plot of land that a household has. The income of urban households and their consumption expenditure cannot be known and determined with certainty. This is due to the reason that a significant number of urban households' occupation and their livelihood source are not known. For this reason this community premises that to be poor is to be lacking in some material worth, to be deficient in some way, or to fail to meet a 'minimum requirement' of something like an individual's whom not well dressed and living in public houses.

According to the woreda CBHI coordinator and the kebele administrators a person identified as an indigent and exempted from premium payments under seven main criteria. These are (i) the person is unemployed due to old age and disability and has no visible source of income, (ii) does not have own home or place of residence, (iii) does not live with a person who have a visible source of income and who has own home or place of residence, (iv) does not have any identifiable consistent support from another person, (v) does not have agricultural land and not involved in any other farming activities beyond farming on land, (vi) living with chronic disease like HIV, TB, Leprosy and others and (vii) younger than 18 and older than 55. An individual above the age of 18 and physically fit to work don't included as an indigent no matter an individual fulfils the above criterias.

The interview result reveals that the effective realization of the goal of exempting the poorest of the poor from out of pocket health insurance premium payments remains a major challenge in part because of difficulties in identifying and therefore being able to targeting this group. Some households whom denied this status argue that the identification and enrolment of the poor is completely arbitrary and does not follow any established criteria.

The other problem in the identification of the poorest of the poor whom exempted from the payment is the quota system. The amount of individuals whom will take this advantage is priorly determined by the Regional Government. In the South Achefer woreda the quota was decreased from 10% to 5% the population of the woreda. This quota is equal for rural and urban kebele without the analysis of rural-urban poverty differentials.

According to the coordinator of the program at the woreda the quota of indigents was decided by the region without any established criteria. The only criterion that was followed for this quota determination was the woreda is perceived as a surplus producing woreda in the region. Poor families enrolled in the first three years that may be interested in re-enrolling the following year were denied the opportunity due to the decreased quota. Because of decreased amount indigent of fully subsidized memberships, the determination of who can benefit and who misses out results in a completely non-transparent, arbitrary and sometimes conflictual among the participants for the selection.

During the researcher survey at the woreda seen rural household leader with an indigent status from Care rural kebele having one hectare of land and five live stokes and two household leader from Durbete town whom complained their non continuation as an indigent, the one was eye blind and having his own residence and the other was female 63 age old living at public home and as she told the researcher she did not have any source of income and sometimes she fulfill her livelihood through begging.

The CBHI management board does not have any mechanism to check whether or not these households really are 'ultra poor'. The identification of a household as ultra poor is optional.

A fair identification and enrolment mechanism for the poor should be based on objective criteria and a transparent selection process. This, of course, is a challenging undertaking. National level criteria for defining the poverty line should be included in such a process.

Government-run community-involved schemes appear to be far less effective in terms of reaching out to marginalized groups as compared to community pre-payment schemes. Government-schemes tend to exclude the ultra-poor as compared to community-run NGO-supported schemes (Anagaw D., 2012).

4.6. Service Delivery at Health Centers

Through the observation and interview with the health centers directors found that the quality of health care provided for CBHI members mainly in the health facilities is in line with the capacity and infrastructure of the health center. There is no positive as well as negative discrimination in the facility towards CBHI members; the same services are available to both insured and non-

insured patients. In the interviews, the facility in-charges indicated that they felt equally accountable to CBHI members and non-members.

But the focus group discussion revealed the different result. The households complain that there are service delays against CBHI members, the physicians, according to households take part to the focus group discussion, mistreat us during the appearance at the health centers. The main reasons cited for dissatisfaction with the quality of care obtained health centers were the following: (a) insufficient availability of drug; (b) inadequate skills/knowledge and courtesy of health personnel; (c) lengthy procedures; (d) lack of sufficient diagnostic facilities; (e) lengthy waiting time; (f) the physicians think that CBHI members come to the health centers without they are sick.

As per the researcher observation is concerned in all health centers members and non members register for service at different windows. At the health centers the member patients outnumber the non members. The existence of comparatively high members for medication at one window might be the case for long waiting of members at health centers for service.

4.7. Financial Viability of the Program

An effective health insurance scheme has to ensure financial viability. The financial efficiency of the CBHI program at South Achefer woreda was calculated with claim ratio[1] and government grant ratio[2]. A 100 per cent claims ratio means that 100 per cent of the premium earned is used to pay claims. Schemes with 100 per cent (or more) claims ratios are not financially viable in the mid and long term because the claims paid are higher than the premiums earned (Stoermer, et al., 2012). A government grant ratio above one means the scheme receives less amount of money from households and high from the government; meaning it is not financially sustainable. The government grant ratio below one means the scheme receives high from member households and low from the government; meaning the program is financially viable.

[1] Claim ratio is a ratio which calculated the amount of money paid to health centers and hospitals to finance the health needs of members of CBHI. It is the function of claim per earned premium.
[2] Government grant ratio is the function of annual government subsidy per enrolled households divided by the annual premium paid by the households.

Year	Number of patients		Payment			Claim ratio	Government grant ratio
	At health centers	At hospital	At health centers	At hospital	Total		
2011/12	**32,633**	**764**	*673, 657.30*	*31,486.80*	*705,138.10*	35.577%	0.6
2013/13	**75,034**	**1,596**	*1,586,012.68*	*336,927.75*	*1,922,940.43*	76.973%	0.825
Total	**107,667**	**2,360**	*2,259,663.98*	*368,414.55*	*2,628,078.53*		

Table 2: Numbers of CBHI member patients take medication, payment made for and its financial viability

Source: Researcher own calculation from the data collected from South Achefer Health Office

The claim ratio for the year 2012/13 and 2012/13 is 35.577% and 76.973% respectively. The result shows the program is financially sustainable for these two years. For the year 2012/13 from 1,981,966.6 earned premiums both from members and government subsidies only 35.577% (705,138.10) was paid for health needs of members. For the year 2012/13 from 2,498,198.6 collected premiums from same source about 76.973% (1,922,940.43) was claimed by members as a payment for the health centers and hospitals for the members' sickness. As these figures show that the degree of the program's financial viability is decreased by around 40%. This implies the scheme was financially viable 2011/12 than 2012/13.

The governments grant ratio of the CBHI scheme at South Achefer woreda for the year 2011/12 and 2012/13 is 0.6 and 0.825 respectively. This implies that the program was financially sustainable for these years. But its degree of sustainability is decreasing as the result move from 0.6 to 0.825.

The evaluation of the claim ratio shows the medical expense of the scheme at the woreda is less than the premium income of the program. The measures of the government grant ratio shows that the premium collected from members of the program is higher than the income received from the government as annual grant. For this reason the scheme at the woreda is financially viable at the decreasing rate.

4.8. Patient Flow

Jutting J (2003), Atim (1998), Bennett et al. (1998), Criel (1998), Wagstaff et al. (2007) as cited in Van der Gaag J, ND, Eckhardt et al. (2011), Preker et al. (2002), argue that membership to the CBHI has a positive coefficient for the demand for health care.

During the FGDs, Ethiopian CBHI members at South Achefer Woreda explained that, compared to the previous period when they were not insured, they visited health facilities more often because all the financial barriers to the health service is removed. This fact was confirmed during interviews with the health centers directors and the observation of the researcher also reconfirms that more than a half of patients at the health centers was CBHI members.

Years	Patients		Total
	Members	Non members	
2009/10	CBHI not started	CBHI not started	66,937
2010/11	CBHI not started	CBHI not started	83,671
2011/12	32,633	58,104	90,737
2012/13	75,034	35,729	110,763

Table 3: The condition of patient flow before and after the start of CBHI and among members and non members of CBHI at South Achefer Woreda

Source: South Achefer Woreda Health Office

If access to health services is improved through CBHI schemes, this can be indicated through a comparison of the utilization rate of health services by CBHI members and non-members. The utilization rate of health services for CBHI members is calculated as the total number of benefits (excluding referral services) used by CBHI members in a year, divided by the average number of CBHI members in that year. The utilization rate of health services for non-CBHI members is calculated in the same way (total number of benefits used by non-CBHI clients in a year, divided by the average number of non-CBHI clients for that year).

A health service utilization rate of 100 per cent means that CBHI members (or non-members) visit their health care facility once a year, more than 100 per cent means that members (or non-

members) visit more than once a year and less than 100 per cent, less than once a year[3]. A comparative health service utilization rate of more than one means that CBHI members use health care services more than the non-members.

The computation result shows that the utilization rate for the year 2011/12 is 261.88% and 42.56% for members and non members respectively. The health service utilization rate for members of 2011/12 is more than 100% i.e. 261.88% and for non member is less than 100% i.e. 42.56%. This implies that members of CBHI visit health centers more than twice a year and non member visit health centers less than once a year[4]. The comparative health service usage among members and non members show the same result i.e. the comparative health service utilization for the year 2011/12 is 2.6188 and 0.4256 for members and non members respectively. This implies again that comparative health service utilization rate more than one i.e. 2.6188 means CBHI members visit health centers more frequently than non members.

The result of for the year 2012/13 show the same result that members of the scheme have a better access to the health services than non members. The utilization rate 238.81% and 30.39% for the members and non members respectively; the comparative health service utilization for members is 2.3881 and non members is 0.3039.

Status/year	Utilization rate in %	Comparative utilization rate	Population
Member/2011/12	261.88%	2.6188	12, 461
Non member/2011/12	42.56%	0.4256	136,514
Member/2012/13	238.817%	2.3881	31,419
Non member/2012/13	30.39%	0.3039	117,556

Table 4: Utilization and Comparative utilization rate of health centers among members and non members of CBHI for the year 2011-2013 at South Achefer Woreda

Source: Researcher own construction from the data collected from South Achefer Woreda CBHI Co-ordination office

[3] Less than once a year means members or non members of CBHI go to health centers or hospitals for medication in average less than once a year.

[4] More than once a year means in average members or non members of CBHI goes to health care giving centers more than once a year for medication.

4.9. Ethiopian CBHI and CBHI Theories: Compared

According to (CBHIS systematic assessment) of community health financing schemes are (i) Community prepayment health organizations (ii) Provider based health insurance and (iii) Government-run but community-involved health insurance. These schemes differ in terms of design and the involvement of the community in setting up the scheme, mobilizing resources, management and supervision.

Community prepayment health organizations characterized by voluntary membership and payments are made in advance in order to cover potential medical costs. Members of the schemes pay premiums on a regular basis, usually when their incomes are high. Such schemes are often initiated with the technical and financial support of NGOs and thereafter the community takes full responsibility for administering and managing the scheme (Ibid).

In provider based health insurance framework the health care providers are responsible for mobilizing resources and providing health care services. The role of the community in designing and administering the scheme is limited (Ibid).

Government run and community-involved health insurance schemes are often linked to formal social insurance programmes with the objective of creating access to a universal health care system (Jakab and Krishnan, 2001 as cited in Anagaw D., 2012).The government (national or regional) plays a substantial role in initiating, designing and implementation of such schemes (Arhin-Tenkorang, 2001 CBHIS systematic review).The disadvantage of these schemes may lie in their design and implementation features. Since such programmes are the result of a top-down approach, they may not be sensitive to local needs (Anagaw D., 2012).

From the features of these three types of community health insurance schemes it can be concluded that Ethiopian community health insurance scheme which is implemented at South Achefer woreda can not be identified in none of these categories of the above mentioned community health insurance schemes. It is not really characterized as community prepayment health organizations because it deficient in the full responsibility for administering and managing the scheme by the community even though it is initiated with the technical and financial support of NGOs i.e. USAID, Abt associate.

Unlike commercial insurance (where the insurer determines the offer of insurance) or social health insurance (where the government determines the benefit package), the benefit package for a CBHI depends on what the beneficiaries decide that they need, and the size of the benefit packaged is capped by the resources that they can commit (Tabor RS, 2003).

Theoretically it is the community that decides the benefit packages; with community decision-making benefit packages can be changed rapidly without the need to receive approvals from outside regulators or supervisors. In Ethiopian CBHI the benefit packages are determined by the government without the consultation with the community. Surprisingly some of the community of South Achefer woreda did not know about the benefit packages, whether they are broad or narrow, according to the researcher investigation. From the benefit package determination view point Ethiopian CBHI is somewhat deviates from the theory.

The name fits for the community health insurance scheme practiced at South Achefer woreda is Government Operated Community Owned Health Insurance (GOCOHI) scheme. This is because such programme is the result of a top-down approach, it is the Federal government initiated and decided to be implemented in the country and administrated by the woreda administration with minimal involvement of community representatives and the packages were determined by the same body. If someone asks the residents of South Achefer woreda whom a member of the scheme whether or not elected their representative for the administration and supervision of the scheme, they will replay you 'no', even they don't know the concept. The role of the community here is paying the annual premium and taking the medical advantages when sickness happens.

4.10. Coverage of the Scheme at the Woreda

The assessment found that CBHI schemes at South Achefer woreda have achieved only 54.47% coverage of the targeted population. This figure varies between 35.69% at Lalibela kebele and 76% at Dilamo kebele. From twenty kebeles of the woreda half of them are scored enrollment coverage which is below 50%.

4.11. Factors Affecting Households' Insurance Intake Decisions at South Achefer woreda

In order to ascertain the characteristics of households that were more likely and less likely to be members of the CBHI scheme, several variables were identified and tested for relationships with

membership in the scheme using SPSS statistical software package. To this end, the researcher employed a Binary Logistic Regression Model as the latter enables to manipulate dependent variables that are dichotomous in their nature in that the respondents were depicted as members to the community based health insurance or not.

For this analysis 813 households were participated and all the respondents fill the questionnaire with 100% accuracy level. The comparison was held between members of the insurance scheme (coded as 1) and non member of the same programme (coded as 0).

4.12. Binary Logistic Regression Model and Its Fitness to the Data

The statistical technique used in this study is a binary logistic regression model. It was verified whether it fits with the variables (both dependent and independent) or not. To this end, the Omnibus test of model the SPSS results were analyzed. The result shows that the model Chi-Square has 19 degree of freedom, have a value of 222.821 and a probability of P=0.000. Thus, the regression model was fitted for the analysis of predictors and the outcome variables concerned. Accordingly, the independent variables (place of residence, gender of the household leader, marital status, education, the efficiency of the health centers, the benefit packages of the scheme, ability to pay the premium, annual net income of the household leader, administrative complexity and chronic medication) do have an effect on the decision of membership into CBHI at South Achefer woreda. A glance at the Hosmer and Lemeshow (H-L) test of the SPSS output of the model reveal that the model employed in the analysis fit to the data. The H-L goodness-fit- of- test statistics has 8 degree of freedom with a level of significance equal to 0.082 which is greater than P= 0.05 and demonstrate that the model is good for the data.

The SPSS software package was again employed to identify the nature of relations between the interested variables. This was done to know the magnitude and direction (positive or negative) of the relation among the dependent and independent variables. The results of all these results were attached as appendix at the end.

According to the researcher statistical survey numbers of factors are responsible for the households' membership and non membership decision to CBHI at South Achefer woreda. Here below the variables were discussed in detail.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Kebele	Durbet(Ref.)			2.565	5	.767			
	Care	.001	.294	.000	1	.998	1.001	.563	1.779
	Ashuda	-.144	.287	.251	1	.616	.866	.493	1.520
	Corench	.105	.312	.113	1	.737	1.111	.602	2.049
	Lalibela	-.114	.282	.163	1	.687	.892	.514	1.551
	Lihudi	-.323	.296	1.195	1	.274	.724	.405	1.292
Sex	Male(Ref.)								
	Female	.219	.177	1.524	1	.217	1.244	.879	1.761
Martial Status	Single(Ref.)			1.376	2	.503			
	Married	.245	.356	.474	1	.491	1.278	.636	2.569
	Divorced	.537	.464	1.340	1	.247	1.711	.689	4.251
Number of Childrens	No(Ref.)			4.112	2	.128			
	1-5	.620	.311	3.972	1	.046	1.859	1.010	3.422
	Above 5	.480	.350	1.880	1	.170	1.616	.814	3.207
Health Centers(1)	Non-efficient(Ref.)								
	Efficient	.003	.178	.000	1	.988	1.003	.707	1.422
Package(1)	Limited (Ref.)								
	Enough	.980	.219	19.982	1	.000	2.665	1.734	4.096
Payment Problem	No(Ref.)								
	Yes	-1.409	.395	12.714	1	.000	.244	.113	.530
Net Income	Subsistence(Ref.)			18.716	3	.000			
	1000-2000	-.278	.396	.493	1	.482	.757	.348	1.646
	2001-3000	-1.238	.432	8.201	1	.004	.290	.124	.677
	Above 3001	-1.176	.469	6.304	1	.012	.308	.123	.773
Chronic Medication(1)	No(Ref.)								
	Yes	.863	.171	25.607	1	.000	2.371	1.697	3.313
Administrative Complexity(1)	No(Ref.)								
	Yes	-1.201	.178	45.389	1	.000	.301	.212	.427
Education	Illiterate(Ref.)								
	Literate	1.092	.168	42.433	1	.000	2.981	2.146	4.140
	Constant	-1.075	.661	2.645	1	.104	.341		

a. Variable(s) entered on step 1: KEBELES, SEX, MARTIALSTATUS, NUMBEROFCHILDRENS, HEALTHCENTERS, PACKAGE, PAYMENTPROBLEM, NETINCOME, CHRONICMEDICATION, ADMINISTRATIVECOMPLEXITY, Educ_1.

Table 5: The statistical result of variables that affect CBHI intake decisions of households at South Achefer Woreda

4.13. Place of residence and Its Impact on Intake Decision

Unlike the theory that the distribution of the population i.e. the population in urban areas, where there is likely to be at least a minimum quality of infrastructure and communications, and high population density, is likely to be easier to serve with an CBHI system and to be a member for the scheme than a widely dispersed rural population due to the fact that the residents in the urban areas accessible for awareness campaigns, better educated, significant advantage in terms of geographic access to health facilities than rural households and diversified economy which enables them to pay the CBHI premiums, the SPSS output demonstrates the deferent result .

The SPSS output result for the correlation of place of residence and membership demonstrated as negative. The result of this study found that the place of residence which is being urban and rural did not have statistically significant effect on an insurance intake decision of households. A likelihood of being membership in to CBHI in Care, Ashuda, Corench, Lalibela and Lihudi is 1.001, 0.866, 1.111, 0.892 and 0.724 respectively times with membership in the reference kebele (Durbete 01). According to the model, the difference to be a member in to CBHI across kebeles is not statistically significant as P value for Care, Ashuda, Corench, Lalibela and Lihudi is 0.998, 0.616, 0.737, 0.687 and 0.274 respectively which is greater than 0.05.

4.14. Gender of the Household Head

The SPSS output for the correlation result for the gender of the household leader and membership depicts positively related. This means that the more the household is male headed, the more the insurance intake decision of these households. The odds of being membership into CBHI for a female headed household are 24.4% times lower than male headed households. But the difference is not statistically significant as P=0.217>0.05. Male headed households are more likely to join CBHI scheme at South Achefer woreda.

4.15. Marital Status of the Household Head

The Spearman rho correlation output for the marital status and CBHI membership shows positive relations. This is to mean that the more individual get married, the more to become the member of the scheme. In the same vein, the odds of being membership into CBHI for married and divorced households is 1.278 and 1.711 respectively times of single households. But the

difference is not statistically significant as the P value for divorced and married households is 0.247 and 0.491 respectively which is greater than 0.05.

4.16. Number of Children

The Spearman rho correlation for the number of children in the household and the insurance intake decision was demonstrated as positive. The more the families are large enough in number, the higher the chance to become the member of the scheme. Households with big family members were more likely to join the scheme than small family size households as shown by the positive coefficient of the number of children as a predictor variable. This is consistent with rational decision making behavior of households since the amount of contribution was independent of the family size i.e. up to five.

Congruent with the results of the correlation, the model purports the claim that the larger in the size of the family, the more commitment that the household leader join the scheme. The likelihood of membership into CBHI for households having up to five children is 1.859 times of those households having no children. This result is statistically significant as $P= 0.046<0.05$. To the same fashion, the odds of membership into CBHI for households having above five childrens are 1.616 times of those having no children. But the difference is not statistically significant as $P=0.170>0.05$. The outcome of this model is coincided with the work of other researchers on the same areas. For instance, Schneider and Diop (2001) and Bendig and Arun (2011) as cited in Panda etal. (2013) and Msuya et al. (2004) found also that large households with more than five members had a greater probability to enroll in the CBHI schemes than others.

4.17. Health Centers Efficiency

The Spearman rho correlation result for health center efficiency and the insurance intake decision at South Achefer woreda demonstrates negative relations. The more the health center service delivery becoming non efficient, the less the insurance intake decision of households at the woreda. Insufficient health infrastructure with few health facilities, insufficient equipment and a shortage of health workers which is the persisting problem in the woreda can deter the insurance intake decision of households of the woreda. Similarly, the odds of membership into CBHI for households considering health centers as efficient is 1.003 times of households

considering health centers as non efficient. But the difference is not statistically significant as P=0.988>0.005.

Stoermer et al. (2012) and Panda et al. (2013) also posited that the successful introduction and development of CBHI insurance schemes depends on the availability of an efficient health system. No amount of money can provide effective care when health systems lack functioning infrastructure required to deliver quality healthcare.

4.18. Benefit Packages

The SPSS output for the correlation for the available health benefit packages of the scheme and the insurance intake decision of household leaders points positive result. The more the health benefits packages the scheme has, the more the households to become a member of the scheme at South Achefer woreda. The probability of membership into CBHI for households replaying the benefit packages of the scheme are "enough" is 2.665 times of households considering the scheme have "limited" health benefit packages. This difference was found statistically significant as P=0.000<0.01.

4.19. Payment Problem

The Spearman rho correlation result between payment problem of the household leaders and becoming a member for CBHI demonstrated as negative. The more the household have the payment problem, the less probability to become the member for the scheme. The odds of membership into CBHI for households having payment problem is 0.244 times lower than households having no such problem. This difference was found statistically significant as P=0.000<0.01.

4.20. Net Annual Income

The Spearman rho correlation output for net annual income and the membership decision of households into CBHI at South Achefer Woreda shows as positive. The more an individual annual income increased the more to become the member for CBHI. Participation in insurance programme was consistently correlated with per capita income; richer households are more likely to join the scheme.

One of the variables that affect the decision of households to join the CBHI scheme at South Achefer woreda is net yearly income of the household leader. The odds of membership into CBHI for households having annual income of 1000-2000 were 0.757 times higher than households living in subsistence life style. But this difference is not found statistically significant as P=0.482>0.05.

The probabilities of being member to CBHI for households having an annual income of 2001-3000 were 0.290 times higher than households living with subsistence. This difference was found statistically significant as P=0.004<0.05.

The likelihood of being a member into CBHI for households having an annual income above 3001 was 0.308 times higher than those households living in subsistence. This difference was found statistically significant as P=0.012<0.05.

Severe poverty can impede the success of a CBHI. If most people are simply struggling to survive, they can't able to pay insurance premiums in advance to use services at a latter point in time. Eckhardt etal. (2011), Gumber (2001), Ranson (2001) and Chankova, etal. (2008), found that income as a significant factor for insurance intake decision of households and conclude that the highest income group were more likely to enroll into CBHI.

4.21. Chronic Medication

The SPSS output for the correlation between the existence of at least one chronically sick individual in the household and the membership into CBHI points as positive. The more chronically sick individuals available at the household, the more likely to be a member of the scheme at the woreda.

The odds of being a member into CBHI for households that had at least one family member living with chronic disease were 2.371 times higher than households having no such member. This difference was found statistically significant as P=0.000<0.01.

Recent quantitative research has shed more light on enrolment decisions of households having a family member living in chronic disease. Households having higher ratio of sick members are

more likely to purchase insurance, explaining the existence of adverse selection and ex post moral hazard (Ito and Kono, 2010 as cited in Panda et al., 2013)

4.22. Administrative Complexity

The Spearman rho correlation result for the existence of administrative complexity and membership decision into CBHI demonstrated as negative relations. The more the existence of administrative complexity, the less the households decide to be a member for the scheme. The odds of being a member into CBHI for households replaying the existence of perceived or actual administrative complexities are 0.301 times lower than households replaying the other way round. This difference was found statistically significant as $P=0.000<0.01$.

The point that complex administrative arrangement leads people to have a gloomy picture on the scheme is found to be supportive of the arguments of other researchers on the same issues. For instance, Panda, etal. (2013) concluded that institutional factors such as the technical arrangements made by the scheme management also influence people perception about the benefit of the scheme. Scheme related factors such as benefit package, design, premium and transparency also affects people's decision to enroll.

4.23. Education

The Spearman rho for the correlation between education and being member into CBHI at South Achefer woreda depicts as positive. The more the household leaders get educated the more to be a member for the scheme. More educated households are consistently more likely to join the scheme. The probability of being a member into CBHI for households having some education was 2.981 times of households have no any education. This difference was found statistically significant as $P=0.000<0.01$.

Eckhardt et al. (2011), Sinha etal. (2006) and Ito and Kono (2010), Schneider and Diop (2001) and Chankova et al. (2008) as cited in Panda et al. (2013) found that education is the most significant variable for households decision to enroll into CBHI and they found that households headed by persons with formal education are more likely to join insurance than others.

4.24. Other Factors Affect the Insurance Intake Decision: Observation and Focus Group Discussion Results

The general level of income and the rate of economic growth at the woreda had a significant effect on households decision to take insurance at CBHI. Like other parts of the country the life at South Achefer woreda is very miserable according to the researcher observation. Life at the woreda capital i.e. Durbete is magical in character. This is to mean that the residents are fulfilling their livelihood without any visible source of income. The condition at rural kebeles is same or more miserable than the urban kebele because the households of these rural kebeles are living with the non diversified livelihood opportunities dependent on small plot of land with rain feed agriculture. The maximum land holding in the selected kebeles of this study is one hectar, half hectar and less is common but a significant section of the society is even landless. A greater amount of income per capita is apt to increase the capacity of citizens to prepay CBHI contributions. Steady economic growth, therefore, is likely to enhance this capacity to prepay. Without a great amount of income or the meanses of income and lack of economic growth it is difficult to enroll a significant part of the society to CBHI scheme. The question can be raised how sustainable health financing strategy can be constructed without having sustainable life at rural population of Ethiopia.

According to one household leader at Care rural kebele told the researcher that sometimes the kebele administrators threat us they will not give improved seeds and fertilizers if household is not a member for CBHI. There was an actual occasion that the kebele administrators refused to give improved seeds and fertilizer for non member of the program. Fortunately am not faced such problem because am already the member of the scheme. The conclusion of this rural household is that such activities of kebele administrators create the suspicion among the population towards the program.

4.25. The condition of Health Centers at South Achefer

South Achefer woreda have seven health centers viz. Durbete, Kat, Yeboden, Lalibela, Lihudi, Ashuda and Zihbist. The estimated size of population to be served by these health centers is 155873.

The Ethiopian Standards Agency enacted minimum requirements for the establishment and maintenance of health center in order to protect the public interest by promoting the health, welfare, and safety of individuals. No person shall operate a health center in Ethiopia, whether governmental, nongovernmental or private, without being licensed as required by appropriate law and this standard (ESA, 2013).

The minimum requirements for the establishment of health centers are exhaustive lists of standards. Checking and presenting all these lists are beyond the scope of this study. For the purpose of the fulfillment of this study basic standards of the ESA was adopted and checked with the physical presence at the health centers of the woreda.

These basic standards include (1) the availability of basic services at the health centers such as general medical service, minor surgical service, nursing service, emergency service, laboratory service, pharmacy services and housekeeping/ laundry/ and maintenance services; (2) governance and human resource services: in line with this standard the availability of management committee or governing board, advisory management committee, human resource manager and continuing professional development for the medical staffs was asked and checked; (3) medical services: availability of service for ambulatory patients for common chronic conditions, MCH services, comprehensive medical history, physical examination for vital signs, clinical examination pertinent to the illness, and functional intra and inter referral services; (4) building and outpatient layout conditions: availability water, light and ventilation, the condition of room arrangement and proximity between services; (5) medical staff: two HOs, one GP, two midwifes, five nurses, one ophthalmic nurse, one pschyciatric nurse, one environmental health professional, two laboratory technicians, two pharmacists, six archive workers, one morgue attendant and one maintenance officer and ; (6) surgical and laboratory services: the availability of minor surgical services, adequate clinical laboratory examinations for common cases and supply of running water at the laboratory room was checked.

4.25.1. Medical Staff Composition

To establish a certain health center, the Ethiopian Standards Agency sets a very minimum medical staff of at least one General Practitioner (optional), two HO, two midwife, five clinical nurses, two laboratory technician, two pharmacy technician, one ophthalmic nurse, one

psychiatric nurse, one environmental health professional, six archive workers, one morgue attendant and one maintenance officer . Based on this none of the health centers comply with this minimum man power standard requirement. Health officers are absent in all health centers except Durbete, Lalibela and Ashuda. In all health centers of the woreda from required five clinical nurses only one is BSc and others are Diploma holders. But Durbete health center deviate from this analysis with having three clinical nurses holding BSc. During a focus group discussion one household leader at Lalibela argue that health professional at the health centers are guys unable to score for preparatory and graduated from unknown private colleges. He questions that how I can go to these health centers with fallen students at ten grades? He said that he never go to this health centers if he was not critically sick and he will never be a member of CBHI if these health professionals are not substituted by BSc holders.

In all health centers the required ophthalmic nurse, psychiatric nurse, environmental health professional archive workers, morgue attendants and maintenance officers are totally absent.

4.25.2. Basic Medical Services

All health centers in South Achefer woreda provide general medical, nursing, emergency, laboratory and pharmacy services though the quality and the degree of delivery is different among the health centers. Minor surgical services though it is required for the establishment of health centers according to ESA standards; it's absent in all health centers, except Durbete health center where the service is partially provided, due to the unavailability of required health professionals and equipments. Housekeeping/laundry/ and maintenance services though it is required for the functioning of a certain health centers, it is totally absent in all health centers of the woreda.

The health centers according to ESA standard shall fully give care of ambulatory patients and follow up of ambulatory patients for common chronic conditions including TB/Leprosy, HIV and other acute and chronic diseases, MCH services and medical assessment at OPD shall have comprehensive medical history, physical examination for vital sign (BP, PR, RR, To), weight and clinical examination pertinent to the illness. The reality of the health centers at the woreda vis-à-vis these services are partial given the unavailability of needed equipments and man power. Comprehensive medical history of the patient, follow up for ambulatory patients for common

chronic conditions and clinical examination pertinent for the illness is unthinkable in all health centers except Durbete.

4.25.3. Governance and Human Resource Service Conditions

The standard begets all the health centers to have management committee or governing board, advisory management committee, human resource manager and the existence of continuing professional development for medical staffs to cop up with new pathologies. The reality at the health centers of South Achefer Woreda is governing board, advisory management committee and continuing professional development for medical staffs are completely lacking in all health centers. The other expectation, availability of human resource manager, is missed in all health centers except Durbete and Ashuda health centers.

4.25.4. Building and Outpatient Layout Conditions

The availability of adequate water, light and ventilation in all rooms of the health centers, the need the arrangement of outpatient services to consider the proximity between services and the outpatient layout need to have waiting areas, reception areas, examination rooms for minor procedure, rooms for providing injection, storage places for sterile supplies and staff rooms is the building and outpatient layout condition expected from health centers.

Unfortunately except Durbete health center water and light is the chronic problem in all health centers, ventilation is the luxury requirement. In all health centers the outpatient arrangement considers the proximity between services except Zihbist health center. Waiting areas, reception areas, storage places for sterile supplies and staff rooms are completely missing in all health centers except Durbete.

4.25.5. Surgical and Laboratory Service Conditions

Minor surgical services for common conditions like circumcision, lipoma excisions, external immobilization of closed and open fractures, adequate clinical laboratory examinations, efficient staff for laboratory result interpretations and availability of running water supply in the laboratory are partially met at Durbete health center and it is below the standard in all other health centers of the woreda.

CHAPTER FIVE

5.1 Summary of the Findings, Conclusions and Recommendations

5.1.1 Summary of the Findings and Conclusions

Development doesn't mean a mere increase in per capita income or gross domestic product (GDP), it has many more subtle elements, to do with education, inequality, health, and etc. Development is therefore measured as the process of improving human health. A complex interrelationship exists between health and development; it is certainly not a one-way relationship, but a reciprocal i.e. economic development can lead for health improvement and an improved health can be considered as an indicator of development.

However, many have contested the centrality of economic growth to health, while it is true that increased economic growth provides the resource base to develop and strengthen health systems, increases in GNP are not always translated into health improvements. For this reason, health improvement programs are central to any development strategies. Health security is increasingly being recognized as integral to any poverty reduction strategy.

In developing countries like Ethiopia, the health financing gap remains a significant challenge to the provision of essential health services for the majority of the population. User fees have been ineffective as a tool for bridging this gap and are now recognized to have had significant negative impacts in terms of inequity of access and catastrophic health expenditure, especially for poor people.

Formal privately owned health insurance schemes cover only a marginal proportion of the population in low-income countries. Due to economic constraints formal privately owned health protection for the vulnerable segments of the population is widely absent. Hence, it is one of the most important challenges today is to increase the access to health care in low-income countries for the significant vulnerable section of the society.

CBHI in such contexts is seen increasingly as a reasonable alternative financing mechanism that provides for some risk pooling and protection against the financial costs of illness. CBHI reduces out-of-pocket expenditure while increasing utilization and improving financial protection. Health

insurance/prepayment is a mechanism that can facilitate the provision of health care services. This study has assessed Ethiopian community-based health insurance schemes at South Achefer woreda.

The Ethiopian CBHI which is designed to achieve a composite of objectives generating additional and much-needed revenues for the impoverished health care system, promoting equal access to reasonable health care for the poor, pooling health risks and preventing impoverishment, and improving the efficiency and quality of health care.

With the adoption of this scheme some common shortcomings of health care delivery such as inverse care and impoverished care were abolished at least for the members of this scheme at South Achefer woreda. Individuals having an ID of the scheme equally take health care delivery without their economic background i.e. whether they are poor or rich. Barriers to health service access are abolished significantly for members of the program. After the introduction of the scheme patient flow to the health centers is increased.

Ensuring equity in enrollment through identification of and premium exemptions for individuals and groups without adequate financial resources is among the stated objective of the scheme. However effective realization of the goal of exempting the poorest of the poor from out of pocket health insurance premium payments remains a major challenge in part because of difficulties in identifying and therefore being able to targeting this group and the quota system without the detailed study of the degree of poverty in the woreda made a considerable portion of socio-economically vulnerable groups whom need to go with the program with an indigent status remained uninsured. Some households whom denied this status argue that the identification and enrolment of the poor is completely arbitrary and does not follow any established criteria.

Low enrollment in to the program is observed. CBHI intake decisions at South Achefer woreda is determined by gender of the household leader, marital status, number of dependent childrens, income, administrative complexity, health centers efficiency, available benefit packages of the scheme and education of the family leaders. The Spearman rho correlation and logistic regression results of the SPSS statistical software demonstrated that these predictor variables had an effect on the households decision to be a member into the scheme.

Income is amongst the most important factors determining household participation in the schemes. This means that despite exemption mechanisms, the poorest of the poor within the society are not reached as they cannot afford to pay regular insurance premiums. The inefficient health system at the woreda is also among the major deterrence factor for insurance intake decision.

Considering the weak results achieved by the existing CBHI schemes in terms of population coverage due to different reasons, weak health service delivery and financial viability (which in rate of decreasing), the existing CBHI approach may not be the most realistic way of achieving equitable access for the population to health services towards universal coverage.

Community-financing through pre-payment and risk-sharing reduce financial barriers to health care, as is demonstrated by higher utilization. In addition, it shows that risk pooling and prepayment can improve financial protection for the poor to use health centers.

5.1.2 Recommendations

Some of the objectives of Ethiopian CBHI, through generating additional and much-needed revenues for the impoverished health care system improving the efficiency and quality of health care, cannot be achieved in the existed ownership style of the program. The ownership of the scheme is for the community, at least in theory. In this ownership no amount of money is entitled to go to finance other health needs of the country like to improve the efficiency and quality of the health care at the health centers and other higher health posts. Unless the scheme is related to other financing options or the status of its ownership changed or amended, all objectives of the program is not achieved in the existed ownership style.

CBHI scheme in Ethiopia is transitional mechanism for building up a comprehensive and sustainable national health insurance system in the country. Without a stronger organizational support structure from other offices to ensure the fulfillment of the basic functions of a health insurance scheme (such as awareness creation, membership enrolment, membership administration, and claims administration), these isolated CBHI schemes are left alone and depend on the personal engagement of members and the support services of USAID, Abt associate. The government CBHI schemes are completely detached from government support

structures in their health insurance management; for example, the directors of the health centers are not involved in supporting public schemes in any way. In each health center, it is better to have a CBHI section managed by coordinator of CBHI. This section shall have the mandate of facilitating interests of members of the scheme using the health center. It is also important the directors of the health centers to get involved in supporting the scheme directly.

In order to target the subsidy to the poor, the government must first define who is ultra poor and poor and then find a way to identify them fairly and accurately. Identifying the poor usually requires an income test and accurate assessment of those who are eligible for the subsidy entails complex procedures and detailed income data. A fair identification and enrolment mechanism for the poor should be based on objective criteria and a transparent selection process. This, of course, is a challenging undertaking. National level criteria for defining the poverty line should be included in such a process. Unless the selection of the indigents through the participation of the community will remain arbitrary and conflictual among the community members. The CBHI management committee shall to check whether or not these households really are 'ultra poor

Government-run schemes appear to be better in terms of ensuring health care access and reducing OOP expenditure as compared to community-run schemes (Anagaw D., 2012). However, community runs schemes seem to be stronger in terms of reaching out to marginalized groups since they have external source of income. The implication is clear schemes that have access to external sources of financing, in addition to premiums, are more effective in providing financial protection and expanding access to healthcare services and can reaching out to the ultra-poor.

If the government is not capable to fully subsidize the needy households above the specified quota, the government can make the donor agencies to participate in subsidizing these households. Expand subsidies to cover extra ultra poor is suggested by members and non members whom participated in focus group discussion.

As suggested by enrollees and non-enrollees at a focus group discussion to increase enrolment upgrade available health services provided, including by employing better trained human resources, and make wider diagnostics services and additional medicines available

No amount of money can provide effective care when health systems lack functioning infrastructure required to deliver quality healthcare. The funding agencies can also participate in capacitatization of health centers. Due to different reasons the government might not be capable to make the health centers go in line with the standards. But the government can let the funding agencies to participate in.

Having insurance is not an end in itself. It is also important that the community shall not encounter even greater obstacles, such as lengthy waiting time, mistreatment and the like, when it comes to using health care services.

There is no one clear path to UC. Bennett (2004) highlights the importance of better understanding how CBHI interact with other elements of the health care financing system. This is important to ensure that appropriate links are made between prepayment schemes in individual communities and other financing mechanisms to ensure that equitable cross-subsidies within the overall health system are promoted. More work is required to explore how the viability, sustainability and equity contribution of such schemes can be strengthened before these schemes can be introduced on a wide-scale basis at national level as the solution to the health care financing challenges in the country.

Health insurance coverage may be of limited value to households living in remote areas where the roads linking them to health facilities are poor and transport options are limited and the available health centers were inefficient; these physical disadvantages may be compounded by low levels of education and scepticism over the benefits of Western medicine (Wagstaff, 2009). In case of South Acefer woreda the two most remote kebeles Chaba and Zihbist were have comparatively low enrolment rate. The implication is overt, together with other measures, the connection of these kebeles with road infrastructure and modernization is vital. And Evidence in the health centers of the woreda has showed that policy intervention that focuses on the improvisation of health centers are needed.

The assessment found that CBHI schemes at South Achefer woreda have achieved only 54.47% coverage of the targeted population. This figure varies between 35.69% at Lalibela kebele and 76% at Dilamo kebele. From twenty kebeles of the woreda half of them are scored coverage

below 50%. The low penetration rate in the woreda reduced the size of the risk pool and the premium inflow. Accordingly more work is needed to increase the members of the program.

The SPSS output for the determinant factors to the insurance intake decision of households at South Achefer woreda shows together with other variables net annual income of the household was the significant factor for such decision. The regression result points insurance intake decision is high among comparatively rich households. An important policy implication here is that poverty alleviation measures and rapid economic growth has positive effects on health insurance enrollment in that it (a) can lift people out of poverty, meaning that more people can afford to pay their premiums; (b) can raise the government's general revenues, meaning that the government can subsidize more of the poor. However, there are other trends that must not be ignored such improvisation of health centers, the engagement of stakeholders and awareness creation campaigns.

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Appendixes

MEMEBERSSHIP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NONMEMEBER	411	50.6	50.6	50.6
	MEMBER	402	49.4	49.4	100.0
	Total	813	100.0	100.0	

Correlations

			membership status	kebele	sex	marital status	number of childrens	education	health centers	package	payment problem	net income	chronic medication	administrative complexity
Spearman's rho	membership status	Correlation Coefficient	1.000	-.011	.022	.048	.025	.231(**)	-.024	.185(**)	-.166(**)	.052	.227(**)	-.299(**)
		Sig. (2-tailed)	.	.748	.531	.170	.470	.000	.497	.000	.000	.140	.000	.000
		N	813	813	813	813	813	813	813	813	813	813	813	813
	Kebele	Correlation Coefficient	-.011	1.000	-.069(*)	.122(**)	.063	-.072(*)	.042	-.026	-.129(**)	.015	-.071(*)	.010
		Sig. (2-tailed)	.748	.	.050	.001	.071	.040	.227	.458	.000	.676	.042	.776
		N	813	813	813	813	813	813	813	813	813	813	813	813
	Sex	Correlation Coefficient	.022	-.069(*)	1.000	.008	-.097(**)	.040	.034	-.044	.108(**)	-.126(**)	.033	.001
		Sig. (2-tailed)	.531	.050	.	.828	.006	.257	.339	.210	.002	.000	.350	.975
		N	813	813	813	813	813	813	813	813	813	813	813	813
	martial status	Correlation Coefficient	.048	.122(**)	.008	1.000	.039	.058	.052	-.006	.015	-.035	-.025	.013
		Sig. (2-tailed)	.170	.001	.828	.	.269	.096	.140	.857	.668	.322	.484	.707
		N	813	813	813	813	813	813	813	813	813	813	813	813
	number of childrens	Correlation Coefficient	.025	.063	-.097(**)	.039	1.000	-.083(*)	.052	-.023	-.023	-.002	.055	-.008
		Sig. (2-tailed)	.470	.071	.006	.269	.	.018	.135	.509	.519	.958	.115	.812
		N	813	813	813	813	813	813	813	813	813	813	813	813
	Education	Correlation Coefficient	.231(**)	-.072(*)	.040	.058	-.083(*)	1.000	-.012	.080(*)	-.169(**)	.163(**)	.042	-.084(*)
		Sig. (2-tailed)	.000	.040	.257	.096	.018	.	.736	.023	.000	.000	.236	.016
		N	813	813	813	813	813	813	813	813	813	813	813	813
	health centers	Correlation Coefficient	-.024	.042	.034	.052	.052	-.012	1.000	-.027	.136(**)	-.116(**)	-.035	.017
		Sig. (2-tailed)	.497	.227	.339	.140	.135	.736	.	.446	.000	.001	.326	.626
		N	813	813	813	813	813	813	813	813	813	813	813	813

Package	Correlation Coefficient	.185(**)	-.026	-.044	-.006	-.023	.080(*)	-.027	1.000	-.016	-.022	.013	-.042
	Sig. (2-tailed)	.000	.458	.210	.857	.509	.023	.446	.	.652	.538	.702	.237
	N	813	813	813	813	813	813	813	813	813	813	813	813
payment problem	Correlation Coefficient	-.166(**)	-.129(**)	.108(**)	.015	-.023	-.169(**)	-.136(**)	-.016	1.000	-.824(**)	.012	.077(*)
	Sig. (2-tailed)	.000	.000	.002	.668	.519	.000	.000	.652	.	.000	.737	.027
	N	813	813	813	813	813	813	813	813	813	813	813	813
net income	Correlation Coefficient	.052	.015	-.126(**)	-.035	-.002	.163(**)	-.116(**)	-.022	-.824(**)	1.000	-.024	-.036
	Sig. (2-tailed)	.140	.676	.000	.322	.958	.000	.001	.538	.000	.	.492	.303
	N	813	813	813	813	813	813	813	813	813	813	813	813
chronic medication	Correlation Coefficient	.227(**)	-.071(*)	.033	-.025	.055	.042	-.035	.013	.012	-.024	1.000	-.173(**)
	Sig. (2-tailed)	.000	.042	.350	.484	.115	.236	.326	.702	.737	.492	.	.000
	N	813	813	813	813	813	813	813	813	813	813	813	813
administrative complexity	Correlation Coefficient	-.299(**)	.010	.001	.013	-.008	-.084(*)	.017	-.042	.077(*)	-.036	-.173(**)	1.000
	Sig. (2-tailed)	.000	.776	.975	.707	.812	.016	.626	.237	.027	.303	.000	.
	N	813	813	813	813	813	813	813	813	813	813	813	813

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

* Correlation is significant at the 0.05 level (2-tailed).

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	813	100.0
	Missing Cases	0	.0
	Total	813	100.0
Unselected Cases		0	.0
Total		813	100.0

a.

b. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding	
Original Value	Internal Value
Non member	0
Member	1

Categorical Variables Codings							
		Frequency	Parameter coding				
			(1)	(2)	(3)	(4)	(5)
kebele	Durbete	144	.000	.000	.000	.000	.000
	care	143	1.000	.000	.000	.000	.000
	Ashuda	141	.000	1.000	.000	.000	.000
	Corench	107	.000	.000	1.000	.000	.000
	Lalibela	144	.000	.000	.000	1.000	.000
	Lihudi	134	.000	.000	.000	.000	1.000
net income	SUBSISTANCE	323	.000	.000	.000		
	1000-2000	209	1.000	.000	.000		
	2001-3000	193	.000	1.000	.000		
	ABOVE3001	88	.000	.000	1.000		
martial status	Single	47	.000	.000			
	Married	707	1.000	.000			
	Divorced	59	.000	1.000			
number of childrens	No	65	.000	.000			
	1-5	594	1.000	.000			
	Above 5	154	.000	1.000			
Sex	Male	466	.000				
	Female	347	1.000				
health centers	NONEFFICIENT	549	.000				
	EFFICIENT	264	1.000				
Education grouped	Illiterate	365	.000				
	Literate	448	1.000				
administrative complexity	NO	530	.000				
	YES	283	1.000				
chronic medication	NO	507	.000				

	YES	306	1.000				
payment problem	NO	479	.000				
	YES	334	1.000				
package	LIMITED	157	.000				
	ENOUGH	656	1.000				

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	222.821	19	.000
	Block	222.821	19	.000
	Model	222.821	19	.000

Hosmer and Lemeshow Test		
Chi-square	df	Sig.
13.994	8	.082

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Kebellle	Durbet(Ref.)			2.565	5	.767			
	Care	.001	.294	.000	1	.998	1.001	.563	1.779
	Ashuda	-.144	.287	.251	1	.616	.866	.493	1.520
	Corench	.105	.312	.113	1	.737	1.111	.602	2.049
	Lalibela	-.114	.282	.163	1	.687	.892	.514	1.551
	Lihudi	-.323	.296	1.195	1	.274	.724	.405	1.292
Sex	Male(Ref.)								
	Female	.219	.177	1.524	1	.217	1.244	.879	1.761
MARTIALSTATUS	Single(Ref.)			1.376	2	.503			
	Married	.245	.356	.474	1	.491	1.278	.636	2.569
	Divorced	.537	.464	1.340	1	.247	1.711	.689	4.251
NUMBER OF CHILDRENS	No(Ref.)			4.112	2	.128			
	1-5	.620	.311	3.972	1	.046	1.859	1.010	3.422
	Above 5	.480	.350	1.880	1	.170	1.616	.814	3.207
HEALTH CENTERS(1)	Non-efficient(Ref.)								
	Efficient	.003	.178	.000	1	.988	1.003	.707	1.422
PACKAGE(1	Limited (Ref.)								

	Enough	.980	.219	19.982	1	.000	2.665	1.734	4.096
Payment Problem	No(Ref.)								
	Yes	-1.409	.395	12.714	1	.000	.244	.113	.530
Net Income	Subsistence(Ref.)			18.716	3	.000			
	1000-2000	-.278	.396	.493	1	.482	.757	.348	1.646
	2001-3000	-1.238	.432	8.201	1	.004	.290	.124	.677
	Above 3001	-1.176	.469	6.304	1	.012	.308	.123	.773
CHRONIC MEDICATION(1	No(Ref.)								
	Yes	.863	.171	25.607	1	.000	2.371	1.697	3.313
ADMINISTRATIVECOMPLEXITY(1)	No(Ref.)								
	yes	-1.201	.178	45.389	1	.000	.301	.212	.427
Education	Illetarte(Ref.)								
	Literate	1.092	.168	42.433	1	.000	2.981	2.146	4.140
	Constant	-1.075	.661	2.645	1	.104	.341		

a. Variable(s) entered on step 1: KEBELES, SEX, MARTIALSTATUS, NUMBEROFCHILDRENS, HEALTHCENTERS, PACKAGE, PAYMENTPROBLEM, NETINCOME, CHRONICMEDICATION, ADMINISTRATIVECOMPLEXITY, Educ_1.

Health centers check list

I am Yechale Degu, MA student at Addis Ababa University in the school of Development Studies. Am doing a research on "An assessment of Ethiopian Community Based Health Insurance at South Achefer Woreda". This check list is prepared to assess the current position of health centers at south Achefer Woreda. The results of this check list will be employed for the partial fulfillment of my Master Degree in Regional and Local development studies at Addis Ababa University.

This is to confirm you that the result of this check list could not be used other than the for the purpose of my study. It couldn't be used for any governmental and nongovernmental organizations. But the result of the study is available for all.

1. General information

Name of the health center _____

Address

Location/ kebele _____

Telephone _____

Catchment population _____

Annual patient load _____

2. Does the health center provide the following basic services?

General medical service _____ (Yes ___, No ___)

Minor surgical service _____ (Yes ____, No __)

Nursing service _____ (Yes ___, No ___)

Emergency service _____ (Yes ___, No ___)

Laboratory service _____ (Yes ___, No ___)

Pharmacy services _____ (Yes ___, No ___)

Housekeeping/ laundry/ maintenance service _____ (Yes ____, No ___)

3. Governance and human resource services

No.	Status			Standard
	Met	Partially met	Unmet	
				Does the health center have management committee or governing board?
				Does the health center have advisory management committee?
				Does the health center have the Human Resource Manager?
				Does the medical staff receive Continuing Professional Development (CPD)?

4. Medical services

	Status			Standard
	Met	Partially met	Unmet	
				Does the health center give care for the ambulatory patients and give follow up for ambulatory patients for common chronic conditions like TB/Leprosy, HIV and other acute diseases?
				Does the health center give MCH services?
				Does the medical assessment at OPD include comprehensive medical history, physical examination for vital sign such as BP, PR, RR and T^{o}, clinical examination pertinent to the illness, diagnostics impression and laboratory workups when indicated?
				Does the health center have functional inter and intra referral facility system?

5. Building and outpatient layout conditions

	Status			Standard
	Met	Partially met	Unmet	
				Do all rooms of the health center have adequate water, light and ventilation?
				Does room arrangement of outpatient services consider proximity between services?
				Does the outpatient layout includes waiting areas, reception areas, examination rooms, rooms for minor procedure, rooms for providing injections, storage places sterile supplies and staff rooms?

6. Medical staff

Health officer (2) _____(Yes ___, No ___)

GP (1) _____ (Yes ____, No ___)

Midwifes (2) _____ (Yes ____, No ___)

Nurse (5) _____(Yes ____, No ___)

Ophthalmic nurse (1) _____ (Yes ____, No ____)

Psychiatric nurse (1) _____ (Yes ____, No ____)

Environmental health professional (1) _____ (Yes ___, No____)

Laboratory technician (2) _____ (Yes ___, No ____)

Pharmacist (2) _____ (Yes ___, No ____)

Archive workers (6) _____(Yes ____, No ____)

Morgue attendant (1) _____ (Yes ___, No ____)

Maintenance officer (1) _____ (Yes ___, No ____)

7. Surgical and laboratory services

	Status			Standard
	Met	Partially met	Unmet	
				Does the health center provide minor surgical services for common conditions like circumcision, lipoma excisions, external immobilization of closed and open fractures and other minor interventions?
				Does the health center provide adequate clinical laboratory examinations for hematology, parasitology, urinanalysis and clinical microscopy?
				Does the laboratory have enough staff regarding service and clinical interpretations?
				Does the laboratory have all facilities like supply of running water?

DECLARATION

This thesis is my original work and has not been presented for a degree at any other university, and that all sources of material used for the thesis have been duly acknowledged.

Name of the student: Yechale Degu

Signature _____ Date 31/7/14

Place: Addis Ababa University

This thesis has been submitted for examination with my approval as a university advisor.

Name of Advisor: Dr. Mulugeta Abebe

Signature _____ Date 31/07/14