ANALYSIS OF HEALTH INSURANCE ADOPTION AND ITS EFFECTS ON HEALTH CARE UTILIZATION IN TANZANIA

A CASE OF NJOMBE DISTRICT

By

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A Dissertation Submitted in Partial Fulfilment of the Requirements for the Award of Master Degree of Science in Project Planning and Management of Mzumbe University.

2018

CERTIFICATION

We, the undersigned, certify that we have read and here by recommend for acceptance by the Mzumbe University, a dissertation entitled "***Analysis of health insurance and its effect on health care utilization in Njombe district"*** in partial fulfilment of the requirement for award of Master degree of science in project planning and management.

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ACKNOWLEDGEMENT

I wish to acknowledge with special thanks, honour, and appreciation to the Almighty God for his mercy, love and amazing grace, He has strengthened me during my life and particularly to archive this academic level. This dissertation could not have been accomplished without him.

I owe my profound gratitude to my supervisor Dr. Robert Lihawa for his guidance, patience, moral, critical and fruitful suggestions from the initial stage of developing proposal also for his constructive ideas in early stage of proposal up to this final report. I also acknowledge the leaders of Mtwango ward and all villages where data was collected, I earnest recognize their contribution, without their help and support data collection would have not been possible.

I appreciate the great support from my lovely parents Mr and Mrs Peter Ngeniuko, my brothers Aggrey and Goodlucky Ngeniuko and my sister Elizabeth Ngeniuko together with his husband Raban Sogolelah for their prayers, support and encouragement.

I am also thankful to my lovely daughter Rachel and son Reuben for their support, and handling, also for motivating and assisting me on various matters occurred to me. Moreover special thanks should go to all my friends who gave me cooperation especially Baraka, Fatuma and Isaiah for their kindness love and encouragements, May God bless them.

I thank God for his protection to me and my very special people. It is his presence and power that this work was completed.

DEDICATION

I dedicate this work to my lovely family of Mr & Mrs Anusitha Ngeniuko

ABREVIATIONS AND ACRONYMS

AIDS	-	Acquired Immune Deficiency Syndrome
CBHISs	-	Community Based Health Insurance Schemes
CHF	-	Community Health Fund
DPT	-	Diphtera Pertussis Tetanus
HIV	-	Human Immune Virus
KHEUS	-	Kenya Household Health Expenditure and Utilization Survey
MDGs	-	Millennium Development Goals
MDGR	-	Millennium Development Goal Report
MHI	-	Mandatory Health Insurance
NFHS	-	National Family Health Survey
NHIF	-	National Health Insurance Fund
NHMS	-	National Health and Morbidity Survey
OOP	-	Out of Pocket
PHI	-	Private Health Insurance
SPSS	-	Statistical Package for Social Sciences
STATA	-	Statistical and Data
TACAIDS	-	Tanzania Commission for Acquired Immune Deficiency Syndrome
TIKA	-	Tiba Kwa Kadi
UHC	-	Universal Health Coverage
URT	-	United Republic of Tanzania
WHO	-	World Health Organization

ABSTRACT

Health is one of the important pillars of socioeconomic that promotes the welfare of the individual and the nation. To address the problem of access to health care services in order to improve health status, Tanzania has implemented various policies for the past two decades. These efforts include the introduction of health insurance whereby over 30% of Tanzanian has been enrolled with health insurance. Furthermore, Tanzania has made significant progress with regards to investment in health sector by promoting major health policies aiming at enhancing sustainability of health status of its populace. Despite of various efforts to improve health sector, the sector is still faced with various challenges including low utilization of health care services. The purpose of this study was to examine the influence of health insurance on health care utilization in Njombe district. Specifically the study examined the extend of peoples adoption of health insurance, social-economic factors influencing adoption of health insurance and the effect of health insurance on healthcare utilization. To archive the objectives the study employed data from primary source drawn from 138 samples of respondents including 79 adopters and 59 non adopters of health insurance respectively.

The probit model was used to examine the effect of social-economic factors influencing adoption of health insurance and ordered probit model on the effect of health insurance on healthcare utilization. Descriptive statistics were used to examine the extent of adoption of health insurance in Njombe district. The findings from the study shows that, 57.2% of respondents adopted health insurance and 42.8% were non adopters, where age, sex, income level, household size, household dependency, premium affordability and education level were statistically factor explaining the adoption of health insurance. Furthermore marital status, education level, household income, distances and health insurance is statistical significant influencing health care utilization. Lastly the study recommends for the awareness creation, remove boundaries of health insurance usage, and increase supply of medicines, and capacity building for health insurance management in order to increase coverage of health insurance so as to improve healthcare utilization in Njombe district.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER ONE
INTRODUCTION

1.1Background of the study

Globally, more than half of the population lives without access to basic health care services where majority of them being settled in rural areas, the number is significant considering over half of the world population whereas the problem is generally associated with underfunding health care services, (World Health Organization 2010). Being uncovered by public or private insurance is a small factor since even in countries that guarantee access to health care by law is frequently unenforced, (World Health Organization 2010).

On other the hand, less than 23% of global health work force are deployed which can even not cover half of the world population that in need of health service. Being in poverty was also mentioned as main factor pushing them down toward limited access to utilization of health service globally. Likewise health sector had made important contribution towards poverty reduction and hunger as highlighted in the millennium development goals. Specifically goals four and five which targets to improve health status by improving health care service to children and women. Similarly Goal 4 targeted to reduce child mortality by reducing two third of children under the age of five. WHO (2008) proposed the comprehensive and structural reforms are needed for the health insurance, funding, health workers, quality of care and financial protecting in order to address the gaps in health care utilization.

Sub-Saharan Africa occupies 13% of the world population and yet stands at 24% of the global disease burden and has only 2% of the world doctors (Mathonnat, 2010). It is characterized by scarcity of resources, shortage of hospital beds, population ratio and low doctor population ratio, where the hospital bed population ratio is 0.4 per 100 populations and doctor population ratio is 0.4 per 1000 population which is actually below the world average (Tey and Lai, 2013). This may be the causes of low utilization of health care services when compared with low income Asian countries. The turn of health care system to cost sharing health care system and health insurance had led to better utilization of health care services and reduce illness

related income shocks and in the long run leads to a sustainable and fully functioning universal health care system (Dukhan, 2010).

Tanzania in particular has a population of 44,928,923 people in which 70.4 percent live in rural areas while 29.6% live in urban area (NBS, 2013). Such growing population are largely posed pressure in the demand of health services among these people living in both rural and urban areas. The population who have access to adequate health care services and facilities have increased from 12% to 26% between 1972 and 2008 (URT, 2011). The population that utilized health service is considered as a low and below of the half of the population, Mulupi *et al* (2013). Currently only 30 percent of the population can access health service through health insurance while the rest over 35 million of people have limited access of health care services either due to poor economically or lack of pocket money. However, the national target was to reach 40 % of population with effective health care service by 2010 (URT, 2015). The reasons for not reaching national target and low utilization of health care services in Tanzania has been mentioned as inadequate of health care, health work force operate at 32% of the required skilled workforce, lack of medical equipment, shortage of drugs and supplies, laboratory reagents as well as income poverty among Tanzania (URT, 2007).

The government is striving to expand health insurance toward the coverage of more than 50 percent of Tanzanian's population by 2020, thus the government have been promoting National Health Insurance Fund and Community Health Fund. There is significant growing population enrolled and beneficiaries that are supported by the fund signify an increasing demand for the health services. Statistics indicate that beneficiaries under the formal sector was at a tune of 3,237,434 while Community Health Fund was at a tune of 6,677,244 bringing to total number of 9,914,678 to 22.7 percent of the total Tanzania population(WHO, 2006).

Membership in micro health insurance plans enables households to utilize health services and get protection against catastrophic health spending in the occurrence of illness, therefore it should be priority to various stakeholders if they are attracted to join the scheme and utilize health care services as well so as to have good health

(Kihaule, 2014). Health insurance is the key component of a functional health system which involves the revenue collection risk pooling and purchasing, also has a role of providing access to health care by reducing financial barriers to utilization of health service and it is expected that health insurance should influence the possibility of utilization (Borghi, 2012).

1.2 Statement of the problem

Access to health care services is crucial for evaluation of health policy initiatives and comparative health analysis in a country. Improvement in health care utilization may result to development especially in productivity and hence bring development to the people, (Agyemang and Osei, 2017). The government of Tanzania recognizes the importance of good health, thus it has formulated and implemented various health policies. For instance, National Health Policy of 2003 plans to assure the health service are available and accessible to all people in rural and urban areas . Despite these efforts done by the government, the expected results from the policies established have not been so much successful (URT 2013).

Government initiated some efforts including introduction of health insurance, where 30% of Tanzanians have health insurance,(URT 2015). However, the national target was to reach 40% of population with effective utilization of healthcare services by 2010 (URT, 2015). Despite various efforts and strategies implemented by the government, still there are challenges facing health sector including low health care utilization (URT, 2014). Moreover, recent available empirical evidence has depicted low utilization of health care services in Tanzania. For instance, the study of Kihaule, (2014) revealed that a third of Tanzanians who were sick did not seek health services due to unaffordable fees of health services.

Available literatures on health care utilization, such as Kayombo *et al* (2012) that examined the experience of health care utilization in seven administrative regions of Tanzania. Similarly study of Elizabeth *et al* (2016) compared the access and utilization of health services in public and non public health facilities using quality, equity and trust dimensions. Regardless of the existing literatures on health care

utilization, none of the literature has looked into the influence of health insurance on health care utilization.

Hence, it is not clear on the influence of health insurance on health care utilization in Tanzania. Therefore, this study has filled the gap by examining the influence of health insurance on health care utilization in Njombe district in 2018 by using probit model.

1.3 Objectives of the study

1.3.1 General objective

The general objective was to analyse health insurance adoption and its effects on health care utilization in Njombe district.

1.3.2 Specific objective

i. To determine the extent of people to adopt health insurance in Njombe district.
ii. To examine the effect of social economic factors on adoption of health insurance in Njombe district.
iii. To examine the effect of health insurance on health care utilization in Njombe district.

1.3.2.1 Research questions

i. To what extent do people adopt health insurance in Njombe district?
ii. What are the effects of socioeconomic factors on health insurance in Njombe district?
iii. What is the effect of health insurance on health care utilization in Njombe district?

1.4 Significance of the study

This study contributes to the better understanding of health insurance and health care utilization in Tanzania. Moreover the study adds valuable information on healthcare utilization and thus it is useful to policy makers and health practitioners. Similarly the study is useful in evaluation of the implemented policies and strategies of health care utilization in Njombe district. Moreover the study is an added literature in

Tanzania; it can act as a reference to other researcher and provides a room for further research.

1.5 Scope of the study

The study is conducted to people who are using health insurance on health care utilization and non-user in Njombe Region specifically in Njombe district council.

1.6 Organization of the study

This report is organized in a way that chapter one includes Background of the study, statement of the problem, objectives of the study, research question, significance of the study, scope of the study and organization of the study. Chapter two presents, theoretical review, empirical reviews, conceptual theory, and conceptual framework. Chapter three presents research methodology ,theoretical model, study area, targeted population, unit of analysis, variable and measurements, sample size and sampling technique, types and sources of data, data collection methods, and data analysis methods, and validity issues. Chapter four presents the findings of the study, description of the data, and regression analysis. Chapter five gives the discussion and arguments on the findings presented in chapter four. Lastly chapter six presents the summary, conclusions, and policy implications as well as areas for further research.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter provides review of the literature from other studies both theoretical and empirical on the influence of health insurance on health care utilization. The chapter discuss, theories that related to the study followed by empirical literature review, then an overview of existing literatures that shows the research gap which was filled by this study and lastly conceptual framework of the study.

2.3 Theoretical literature review

This section outlines the various theories of utilization of health care services. The theories discussed are human capital theory, expected utility maximization theory, Sunchman's stage of illness and medical care theory and person's theory of sick role.

2.3.1 Human capital theory

The theory of human capital has been widely used to explain the health status of an individual. The theory analyzed demand for health from the utility function. In this theory, demand for health is modelled like demand for any other commodity as individuals maximize utility subject to given budget and time constraints. According to Grossman (1972), health care services are demanded because they improve health status. This implies that demand for health services is derived from demand for health. An individual inherits an initial stock of health which depreciates with age and increase through investments. Thus an individual seeks medical care input in order to offset the depreciation of the health stock.

Furthermore, Human capital theory explains the motives for an individual to invest in human capital through education and job training so as increase the productivity of the individual in the labour market. Thus, the theory highlights the role of human capital in producing earnings and in the household sector to produce commodity which enters back into the individual utility function (Becker, 1964; Grossman 1972). This provides incentives for an individual to invest in human capital through schooling and on-job training to increase health and productivity. These investments

include direct outlays on market goods and the opportunity cost of time that must be withdrawn from competing uses. Thus this theory follows human capital theory to analyse health insurance its effects on health care utilization

2.3.2 Expected utility maximization theory

The expected utility maximization theory explains that insurance demand was the choice between uncertain loss and a certain loss, (Jowett, 2007). The theory assumes that people are risk averse and that their choices are made on the basis of preferences and wealth. The theory assumes that people are able to level out their income over two different conditions of being ill and health. Thus health insurance reduces the uncertainty faced by an individual in the episode of illness. This certainty allows insured to reach higher utility in case of illness than those without insurance. Therefore for an expected utility maximizing consumer, demand for health insurance and health care utilization is interdependence. Individual who expect to consume more health care will be more likely to buy health insurance coverage than those who does not expected to use little health care utilization.

2.3.3 Sick role theory

The theory of sick role explains the rights and responsibilities that are particularly important for the people who are ill. The theory complies four main component which are; the individual is not responsible for their state of illness and not expected cure without assistance, individual are excluded from doing normal roles and tasks, sick is unexpected state and make possible recover, individual are expected to find medical assistance and medical treatment. According to Reuben (2008) the society adopts and allows some level of variation from norm for those who are diagnosed with any form of illness. Having an illness is recognized as being undesirable condition and individual should receive medical care and fulfil with the treatment to facilitate their recovery. This theory attempt to show behaviour of individual who is ill, but it fails to account for inconsistency in illness behaviour.

2.3.4 Sunchman's stage of illness and medical care theory

Sunchman's stage of illness and medical care theory explains five stages for individual decision which decide if the person will utilize health care or not. The first stage is individual symptoms experience, the second stage is individual assumption of sick role where he or she will not do any task therefore individual have explore arranged referral system for treatment, third stage is medical care contact where individual seek for professionals in order to get treatment and medicine, fourth stage is dependent patient role where individual accept professional health care treatment and last stage is individual recovery from illness, of which the individual be in good health and continue with his or her daily activities but if the individual is not recovered the person may think he or she has chronic illness,(Reuben, 2008).

2.4 Empirical literature review

Wang *et al,* (2017) analyzed the impact of Health insurance on maternal health care utilization for Ghana, Indonesia, and Rwanda. They used propensity score matching approach and standard ordinary regression model to evaluate the effect of health insurance coverage on women using antenatal, and delivery care. In analysing the insurance effects, the authors compared women with insurance and women without insurance and found that the insured women were more likely to have three or more prenatal checkups, deliver at hospital, receive professional assistance during birth and receive post natal checkups and vaccination for their children. Their study also found that education increases the probability of women enrolment in health insurance. Also women with fear to risk are more likely to seek health insurance and seek maternal health care services. Furthermore study found that the maternal age at most recent birth, current marital status, mother's level of education, mother's employment status, education of the household head, and mother's exposure to mass media was more likely to have health insurance coverage and seek antenatal care. Their study concluded that educated women and wealth status of the households was important predictor of women's enrolment in health insurance. However the study carried out a survey on women only, those who use health insurance and non user on healthcare utilization. Hence its finding cannot be generalized to all people who use

health insurance, and thus the study is different from the present study it considered all women and men.

Shin *et al* (2015), examined factors determining children's private health insurance enrolment and children's health care utilization in Korea by using logit model. They found that the factors like children's age, sex, parents' education status, employment status and household income quality, are important determinants for children's enrolment in private health insurance as they were significantly related to the insurance enrolment. They also found that private health insurance has a significant effect on outpatient cost and inpatient costs.

The study also concluded that children's private health insurance enrolment was influenced by parental social economic status. The limitation of this study is that, it based on private health insurance only where higher income household only can afford to enrol, and say nothing on public health insurance. However, the public health insurances are capable and suitable in serving majority of the community both poor and rich. The study's limitations contributed to the present study considering the gap and fill it by examining the influence of health insurance to all who are insured and none insured on healthcare utilization basing on public health insurance, CHF and NHIF.

Comfort *et al*, (2013) conducted the study on the effect of health insurance on the use and provision of maternal health service and neonatal health outcome in Sub Saharan Africa including Asia, Latin America and Turkey. The analysis was done using multivariate regression analysis, Propensity Score matching, and cross sectional regression. Their study found that contextual factors like geographical access to provider influence the effect of health insurance on the use and provision of maternal health service and neonatal health outcome. They also found that access to better quality care might influence the magnitude of its effect on demand for maternal health services as well as its effect on maternal and neonatal outcomes and sustainability of insurance schemes. Their study concluded that there is relationship between health insurance, maternal and neonatal health outcomes. However the results of this study used small sample size of eleven numbers of people in Asia, nine

in Latin America and eight people in Turkey. The present study differs from this study in terms of the sample size used, since present study used sample size of 138 to analyze the influence of health insurance on health care utilization.

Duku *et al* (2016) examined the effect of health care utilization and frequency use of national health insurance renewal in Ghana using logistic regression. They found that majority of people who utilized health care renewed their membership and got service well while those who did not renew health insurance in utilizing health care were dropped out. Furthermore they found that new membership was revealed to be higher for those who utilize health care than those who do not renew their health insurance. Moreover the study focused to the people who renew health insurance, in 2008 to 2013 where the present study focused more on how health insurance influence health care utilization by using primary data. However the study added knowledge on health care utilization to the current study.

Awoyemi *et al* (2011) conducted the study on the factors influencing utilization of health facilities in rural Kogi state Nigeria. The study used Multinomial logit regression model to analyse the factors influencing the utilization of health facilities in study area. They found that distance, household size, and total cost of seeking health care affect the utilization of government and private hospitals. Furthermore, the study depicted unequal distribution of health facilities as well as low level of accessibility of patient to medical facilities in the study area. They concluded that government should ensure equitable accessibility to health care delivery across the study area by employing more medical and paramedical staff and establish public health centres to the core rural areas. The limitation of this study is that it based on rural areas while neglecting the urban. The study also based more on distance as the barrier to healthcare utilization and thus influenced the current study to focus more on the influence of health insurance on health care utilization including distance as the variable as well as basing in both rural and urban areas in Njombe.

Abuosi *et al* (2016) conducted the study on equity between the insured and uninsured patient in terms of quality care in Ghana. They used Ordinary Least Squares (OLS) regression in the analysis and found that there is inequality in terms of quality of care between insured and uninsured. Also insured tend to be affected by long waiting time compared to uninsured people and there is no significant difference in perception of general quality of care between insured and uninsured patients. However, it found significant dissimilarity between insured and uninsured patients in respects of financial access to care. Their study concluded that insured and uninsured patients are not treated unequally, contrary to prevailing anecdotal and empirical evidence. Furthermore, the study focused on equity between insured and uninsured in provision of health care and did not touch on how health insurance influencing healthcare utilization.

Lopez-cevallos and Chi^2 (2009) conducted the study on social-economic determinant and quality of healthcare utilization in Ecuador. The study used Andersen's model of healthcare utilization behaviour. Relevant variables for the study were selected from 2004 National demographic maternal and child health survey (ENDEMAIN) household survey. They found that almost a third of Ecuador population lack regular access to health service and more than two thirds have inadequate resource to pay for health services. Their study also found that there was negative significant relationship between household economic status and utilization of preventive and curative service. Conclusively, a need for healthcare reforms was required in order to address the issue of inequalities systematically in Ecuador. Also the study insisted on the necessity of public health authorities to move forward on a reform that will expand coverage, particularly to the lower and middle income households.

Agyemang and Osei (2017) examined the influence of health insurance status on people's health seeking behaviour in rural Ghana. The study used bivariate regression technique to demonstrate the influence of health insurance on the use of health care among the rural. The quantitative study was done from sample of 286 respondents that were selected based on total number of housing unit of each community. The findings showed that health insurance status has a significant

influence on health care utilization, where people with health insurance status are more likely to attend health care facilities and get services. Therefore they recommended that stakeholder and government have to make sure they improve access to insurance service so as to be reached by everyone around in Ghana. Nevertheless their study used bivariate regression technique to demonstrate the influence of health insurance on the use of health care in the rural. The current study is differentiated from this study as it used Probit regression model to examine the social economic factors influencing adoption of health insurance in Njombe district.

Liu *et al* (2012) evaluated and compared equity access to health care in rural health insurance system in China and Vietnan. The study used qualitative explanatory approach which focused on group discussion and interview. They found that health insurance membership has no significant impact on outpatient service utilized although they were associated with high utilization of inpatient service. The study also found that bureaucratic obstacles, low reimbursement rate and poor service quality were the main barriers for members to use health insurance. Health insurance system was doing better in provision of health care utilization within the health insurance members and not outside member.

They concluded by making comparison between health insurances and medical aid group. Medical aid group was revealed to have higher utilization and cost of inpatient service for treating associated condition than those in health insurance group. The strength of this study is that it evaluated and compared access of health care in two countries, however the study used only qualitative approach and this limitation challenged the present study to employ quantitative and qualitative method.

Gakii, (2013) investigated the role of health insurance on health status, health care utilization, and health care provider choice in Kenya. The study used probit regression model to analyse health production and health care decision conditional on illness. Multinomial probit model was also used to analyse the effect of health insurance on health care provider choice. The analysis based on secondary data drawn from Kenya Household Health Expenditure and Utilization Survey (KHEUS).

The study found that insured people have a chance of seeking treatment during sick period than others. The study also found that health insurance, gender, income, distance, and mode of transport to health facilities are strongly influenced by choice of health provider .This cause chance of people visiting government facilities to be lower to the people with insurance card. Author concluded that there is a need for policy intervention in order to bring changes in health insurance coverage. This study increased knowledge on the usage of probit regression model hence influenced the current research on the usage of probit model, however the study used secondary data and current study used primary data.

Abu-Bakari *et al* (2016) examined the effect of health insurance on health care utilization in Malaysia. They used logit model and zero truncated poisson model. Data for the study came from Malaysia National Health and Morbidity Survey III (NHMS) and the study variables include inpatients, age, sex, education, marital status, household size, chronic illness, smokers, income, health insurance status, and distance. Their study found that age, marital status, household size, health status and income are the significant variable that determine and influences access of heath care while health status is the only variable that influence intensity of care. Their study found that insurance ownership determines access to health care but does not influence the frequency of use. Although the study used secondary data in examining the effect of health insurance on health care utilization and used logit model and zero truncated poisson model. The present study used primary data and probit regression model.

Shimeles (2010) conducted the study on Community health insurance schemes in Rwanda. The study aimed to assess the role of mutuelles (CBHISs) in facilitating utilization of health care service, reducing of catastrophic health related expenditure and social inclusion by using probit model. The findings shows that membership into Community Based Health Insurance Schemes had a possibility of increasing health care utilization by 15% following an illness episode, for the poor more than the non poor households. The study further found that insured people had lower probability of experiencing catastrophic expenditure compared to uninsured people.

Moreover the study motivated the current study to use probit model in estimating social economic factors influencing adoption of health insurance.

Sharanbekyan (2012) examined the impact of health insurance on health care utilization in Armenia. The study sought to measure the magnitude and the direction of the impact of the law on health care utilization. The study used two stage least square estimation methods where in the first stage health insurance is measured with both probit regression model and linear probability methods. The results showed that investment on health insurance policy increasing the number of hospital visits by more than one times. Therefore health care utilization has a positive and significant effect on health status of individual or person. The limitation of the study based on law, the study focused more on the application of law in health care utilization and failed to look on utilization of health services to the people, and if government support them through provision of health facilities or not. Therefore the current study based on understanding the extant of people adoption of health insurance in order to know if people adopted health insurances so as to reduce burden in buying medicine in order to have better health.

Bailey *et al* (2016) analysed the health care utilization among children's with health insurance programs expansion in Oregon. They used poisson mixed model to obtain pre post utilization ratio and asses changes within and between groups. They found that children who gain public insurance coverage have increased utilization of important health care after gaining coverage; children utilize services differently to uninsured verses insured. These findings inform changes in the United State health insurance landscape and how these changes may affect children access to primary care. However, the study was based on children only where the current study focused on all the people who use health insurance and non user of health care utilization in Njombe.

Olok *et al* (2011) conducted a study on analysis of healthcare utilization social economic factors and child health in India. The study used data from National Family Health Survey-3 (NFHS-3).The findings showed that vaccination against DPT, polio, and measles were significant predictors, 2.43 doses of polio vaccinations

and 45% of children were not vaccinated against measles, due to this underscoring there is a need for expanding immunization coverage for Indian children, treatment against intestinal parasites and children food consumption Patten's were beneficial for children's height, weight, and haemoglobin concentration. Therefore this paper analysed in detail the effect of demographic, social-economic and healthcare variable on child health indicators and used secondary data, the current study was focused more on the analysis of health insurance and its effect on healthcare utilization by using primary data.

Macha *et al*. (2014) assessed the determinants of Community health Fund membership in Tanzania using mixed method approach. The study identify that CHF household heads were more likely than the heads of uninsured households to be male, married completed secondary education have higher number of household members. They were also many compared to uninsured in Kigoma and Mbulu district. Wealth, large household Christianity was found to influence enrolment in to CHF. The qualitative analysis shown that household income; occupation, household size, Poor health status of household members and the level of understanding risk pooling were promoted demand side factors connected with enrolment. However the study used mixed method where the current study used Probit regression model to analyse the social economic factors influencing adoption of health insurance and effect of health insurance on healthcare utilization.

Kihaule (2014) conducted a study on the impact of rural household's member in micro health insurance on utilization of health care service in Tanzania. The study used matching estimator method to examine the utilization of health services among insured people, and data from Tanzania Demographic and health survey of 2011. The findings shows that membership in health insurance plan increased the utilization of health services among the poor households in rural areas on the other hand the insurance scheme did not give protection against catastrophic health spending among the rural households. He concluded that health facilities should provide sufficient supplies so as to minimize out of pocket spending for health insurance in the period of illness. This study deals with rural household member only where the

present included both insurance member and non member and rural and urban households.

John *et al*. (2012) investigated the impact of health insurance on health care utilization and out of pocket payment in South Africa. The study aimed to improve access to care and reduce direct Out Of Pocket payments. Their study used propensity Score matching to analyse the extent to which membership of medical scheme in South Africa increases health care utilization and also reduce out of pocket payments. The findings shows that the increase use of private health services members does not results in to lower OOP payment for non member, and health insurance uses has no significant effect on the use of public health service but increase uses of private health services. Moreover their study focused more on OOP payment. The present study focused more on health insurance users and non users on health care utilization in Njombe.

Erica *et al.* (2011) examined on health insurance coverage and health care access in Moldova. The study used multivariate regression to show determinants of health insurance. The results shows that 78% of respondents were covered by Mandatory Health Insurance (MHI).Where factors related with being uninsured including self employed especially in agriculture, unemployed, younger age and low income. The respondent who were self employed especially in agriculture were over twenty seven times more likely to be not insured than respondents who were employed. Most of the respondents who were uninsured they blame that high cost of insurance scheme is the reasons for them to fail to join to insurance scheme. They concluded that people who are uninsured had impact on utilization, therefore the advantage and disadvantage of MHI provide a important lesson for policy maker to address the challenges of archiving equitable health insurance scheme to low and middle income.

Sohn and Jung (2016) analyzed the effect of public and private health insurance on medical service utilization the national health insurance system in Korea. The study analyzed the data by using hierarchical multivariate poisson regression analysis in which covariate and interaction items are applied after adjusting for different

treatment effect. They found that those who covered by both medical aid and private health insurance were expected to receive more inpatient care and outpatient care than those who were only covered by national health insurance. The study concluded that the significant findings of the study is that difference in quality of health care utilization are shown whether to patient uses National Health Insurance or Private Health Insurance (PHI), therefore police maker will obtain helpful information when reforming the health care delivery system by analyze the insurance system to determine how best to reform National Health Insurance in order to set the rights of medical service consumers through Private Health Insurance. Furthermore there exist gap in that are private and public insurance that affect utilization of health care. The present study focused on social health insurance influences on health care utilization in Njombe.

2.5 Summary of reviewed literature

Despite that Tanzanian government committed to improve health system with increase number of health facilities and decreasing user charges to very minimal amounts. This include offering free health services at dispensaries and health centres, but the level of non utilization of health care service to people who seek treatment when feel sick is still very high. For instance, Kihaule (2014) conducted the study on the impact of rural household's member in micro health insurance on utilization of health care service in Tanzania. The study revealed that a third of Tanzanians who were sick did not seek health services due to unaffordable fees of health services. Kayombo *et al* (2012) examined the experience of health care utilization in seven administrative regions in Tanzania. Similarly study of Elizabeth *et al* (2016) compared the access and utilization of health services in public and non public health facilities using quality, equity and trust dimensions. Regardless of the existing literatures on healthcare utilization, none of the literature has looked into the influence of health insurance on healthcare utilization.

Hence, it is not clear on the influence of health insurance on health care utilization in Tanzania. Therefore, this study seeks to fill the gap by examining the influence of health insurance on healthcare utilization in Njombe district by using ordered probit regression model.

2.6 Conceptual framework

Kothari (2004) defines conceptual framework as an abstract idea or a theory used to develop new concepts or to reinterpret existing ones. It gives the relationship between the dependent and independent variables. The study includes independent variable which are health insurance and dependent variables which are health care utilization. The conceptual framework summaries the concepts, assumption, expectation, and theories that support and inform research design. This summarizes the variable derived from theoretical and empirical literature review on the influence of health insurance on health care utilization and in this framework the three major components are delivered. This includes social-economic factor which are age sex education level marital status, household size and household income, and insurance and location factors like insurance, premium insurance and distance to health facilities as independent variables and health care utilization as dependent variable which is measured by number of visits health care facility per month. Based on conceptual model which is developed to demonstrate variables and their relationships the following are the model which shows relationship between independent and dependent.

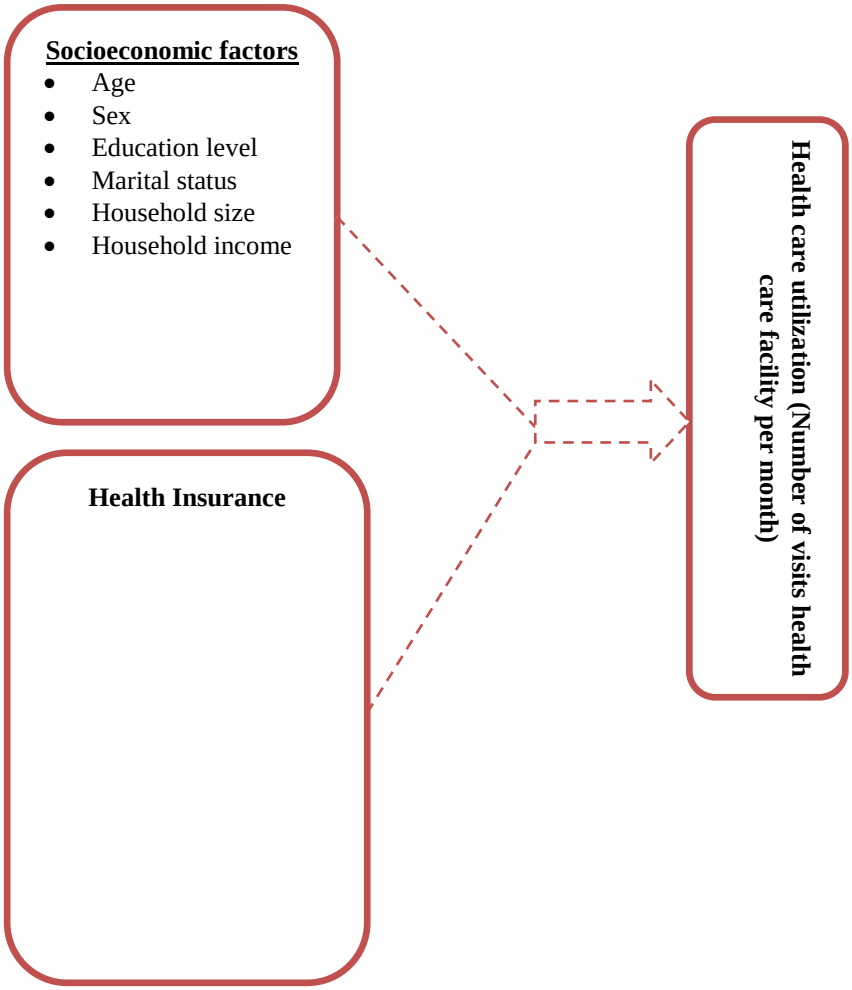

Figure 2.1: Conceptual framework

Source: researchers own construction (2018)

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology and research design that was employed in this study. It includes the research design, study area, study population, sample size, sampling techniques, data correction methods, econometrics analysis, the specification that used to derive the results, variables and measurement of variables that was used in data analysis and description of the data source utilized in the study.

3.2 Research design

Kothari (2004) defines research design as the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. It consist blue print for the correction, measurement, and analysis of data. There are several research designs, such as, experimental and non-experimental design. Experimental designs can be either informal designs such as before-and-after without control, after-only with control, before-and-after with control or formal designs such as completely randomized design, randomized block design, simple and complex factorial designs, out of which the researcher must select one for his own research work.

In this study cross sectional design was employed where by data was collected in a single period of time for each health insurance users and non users.

3.3 Study area

This study was conducted in Njombe district, Tanzania. Njombe District was a former district of the Iringa Region of Tanzania. The Njombe district is divided in two parts which are Njombe Rural District and Njombe Urban District. Up to 2012 Njombe District was among the districts of the Iringa Region. In 2012, the area that had been within the old Njombe District was incorporated into the new Njombe Region.

According to Tanzania National Census, (2012) the population of the Njombe District was 420,348. Njombe district council has 11 wards with population as follows; Idamba 3,148, Igongolo 8,447, Ikondo 7,635, Ikuna 9,178, Kichiwa 9,961, Kidegembye 8,068, Lupembe 7,709, Matembwe 8653, Mfliga 4249, Ninga 5,751 and Mtwango 12948. The main economic activities of the people in Njombe are agriculture and livestock keeping. Njombe District was selected as an area of the study due to the fact that is among of the districts which have high coverage of health insurance in Tanzania. It accounts number of people using health insurance to the end of financial year from July 2016 to September 2017 which total of members is 44958, and total number of households is 20,341 (Njombe district coordinator of Community health Fund 2017). Through this coverage helped the researcher to know the influence of health insurance on health care utilization in Njombe District.

3.4 Study population

The population which was targeted for this study was the health insurance users or members who use on utilization of health care services, and non users, in Njombe district, specifically Mtwango ward due to the fact that the ward is having high population compared with other wards in Njombe district.

3.5 Sample size

The sample refers to the selected members or units such as individual groups, organizations which represent the population of the study, Kothari (2004). According to Milanzi (2009), sample size is any subset of a population. It is a portion of the population that is studied to learn about something in the population. A sample is found where only a proportion of members of the whole population are measured. The portion chosen to represent the population was become the sample size that a researcher was used to obtain. Assuming that initial estimation of proportional "p" for the study is 90%, degree of precision 5%, and 95% confidence interval was taken. Hence

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

where

n= sample size

N= total population12948

Z=confidence interval, 1.96

P=estimation proportional, 90%=0.9

q= degree of accuracy, 1-p= 0.1

$$n = \frac{1.96^2 * 0.9 * 0.1 * 12948}{0.05^2 (12948-1) + 1.96^2 * 0.9 * 0.1}$$

$$= 138$$

3.6 Sampling techniques

Sampling is the process of selecting a number of individuals or objects from population, such that the selected group contains elements representative of the characteristics found in the entire group, (Kothari, 2004). There are two types of sampling which are probability sampling and non probability sampling.

3.6.1 Probability sampling technique

Probability sampling is the type of sampling whereby every member of the population has a chance of being selected to form a sample, Kothari (2004). The study used probability sampling because it enables the researcher to generalize to the large population and make inferences. The study used simple random sampling to obtain a sample of insured and none insured in Njombe district where by each health insurance users and non users was chosen randomly entirely by chance. This sampling technique was also used to obtain 138 respondents in order feel the survey questionnaires.

3.7 Data correction methods

This section describes the types for data collection and source. The study employed only primary and secondary sources of data. Data from primary sources was collected through survey questionnaire and secondary data was collected through literature review.

3.7.1. Survey questionnaire

Questionnaire is a method which uses a set of questions for collecting data from the respondents. A series of written questions are prepared to be completed by the respondent. Questionnaires were used to obtain data from health insurance users non users, number of people who visit health centres and non visitor. Both open and close ended questionnaires was employed, but the researcher was use more close ended questionnaires whereby respondents was fill the empty space by giving their own opinions, also by ticking against one of the proposed answers. The researcher chooses to use the questionnaire method in this study because it minimized the bias also respondents was feel free to fill in the information at their convenient time and place, (Rwegoshora 2006).

3.8 Variables, type of variable, their measurements and expected sign.

The table 3.1 shows the variable that was used in data analysis .The dependent variable and independent variable. The dependent variable is the number of visitor at different level of health facilities. The independent variable is the social economic factors like age, sex, marital status, health status rating, and health insurance.

Table 3.1: Variables, type of variable, their measurements and expected sign.

Variable	Types of variable	Measurement	Expected sign
Adoption	Dummy	1=adopters 0= non adopters	+/-
Age	Continuous	Years	+/-
Sex	Dummy	1=male 0= female	+/-
Education level	Continuous	Number of school years	+/-
Income	Continuous	Tanzanian shillings	+/-
Marital status	Dummy	1=married 0=single	+/-
House hold size	Continuous	Number of people in the household	+/-
Health care utilization	Dummy	1= Number of visitor at different level of health facilities 0= otherwise	+/-
Distance	Continuous	Kilometer	+/-

Source: Researcher own construction (2018)

3.9 Validity and reliability

Validity and reliability of the gathered information should be checked all together to ensure that the study defined the truth and the wanted results. The validity and reliability were profoundly considered in this study, (Kothari 2004).

3.9.1. Validity of the study

The term validity refers to the extent to which a measure adequately represents the underlining construct that it is supposed to measure. This can be assessed by using theoretical and empirical approaches and should ideally be measured by using both approaches, Bhattacherjee (2012). This is the most important aspect that should be addressed in research project. This means that once the research instrument is not valid it means that the data that collected was also wrong and the findings and conclusion wrong too. This is a scale or tool to measure what is supposed to measure. It is the accuracy and truth of the data and findings that are produced.

The appropriate sampling techniques such as simple random sampling and methods of data collection which is survey questionnaire were used to enhance trust worthiness of the findings. Moreover, the study used relevant literature to construct the research objectives, questions and theoretical model so as to enable the collection of relevant data for the study.

3.9.2 Reliability of the study

According to Kothari (2004) defined Reliability as the consistence of the measurement technique. In addition, Bhattacherjee (2012) defined reliability as the degree to which there is consistency in results when different observers or the same observer on different occasions uses the same measuring instrument.

Reliability of a research instrument is the measure of the degree or extent to which a research instrument yields consistent results of data after repeated trials. Reliability has to do with the quality measurement. In its everyday sense, reliability is the "consistency" or "repeatability" of your measures. This means that a measuring instrument is reliable if it provides consistent or same results. Reliable measuring

instrument contributes to validity, but a reliable instrument needs not to be a valid, Kothari (2004).

Lastly, questionnaire for this study subjected to tests for legitimacy to figure out if they require changes or not. The researcher conducted a pilot investigation of 15 respondents to set up the validity of the study.

Therefore these two components are important in any research to know if the research objective and conclusion concerning the finding are right or not right.

3.10 Ethical consideration

Ethical standards observed in the planning and conducting study. The researcher secure research clearance from Mzumbe University; also researcher requested for research permit from Njombe district. The study was conducted with the consent of the respondents after being informed about the purpose of the study and their choice to participate. The researcher observed the right to privacy of the respondents and the confidentiality of their information.

3.11Data analysis

The study was used both descriptive and econometric data analysis where;

3.11.1 Descriptive analysis

In-order to obtain descriptive statistics the researcher used percentage and frequencies cross tabulation, and mean, a statistical package for social science (SPSS version 16.0) and STATA was used to analyse the data. The descriptive statistics was used to analyze data on the extent of adoption of health insurance among the people uses health insurance and non user of health insurance.

3.11.2 Econometric model analysis

The STATA programmes were used to run the Binary Choice model (Probit) to obtain relationship between variable and test the hypothesis. The econometric analysis gives the percentage probability of social economic factor that influence adoption of health insurance and the STATA programmes were also used to run the

ordered probit model to obtain relationship between variable on the effect of health insurance on health care utilization.

3.12 Mode of analysis

In analysing the effect of social economic factors influencing adoption of health insurance binary choice model was used. This binary choice model is useful when our outcome variable of interest is binary , Shin *et al*, (2015) In this study we compare the outcome of health insurance adopters' and non adopters individual who have a similar probability of being adopt health insurance. The expected variable of this study was adopters and non adopters, therefore probit model was used.

$$Y = \begin{Bmatrix} 1\ adopt\ health\ insurance \\ 0\ otherwise \end{Bmatrix}$$

Because the probability that desire is greater than zero (y*> 0)

Prob (y=1) = prob (y*> 0)

Or less than or equal to zero (y* ≤ 0)

Then $y_i = \begin{Bmatrix} 1\ \ if\ y\ * > 0 \\ 0\ otherwise \end{Bmatrix}$

Adoption of health insurance = $\begin{Bmatrix} 1\ if adopt\ health\ insurance > 0 \\ 0\ if adopt\ health\ insurance\ \leq 0 \end{Bmatrix}$

Because household or people may or may not adopt health insurance the dependent variable is unobserved and is presented as follows

$Y^*_i = \beta w + ei$

Y^*_i is the dependent variable which assume unobservable status, β represents the independent variable *w* represent coefficient of the independent variable and e_i is error term with standard normal distribution.

3.12.1 Model specification

In analysing the relationship between social economic factors and adoption of health insurance in Njombe district probit model was used. Health insurance is either adopted or not due to social economic factor of household or individual. Here we assume that probability of individual to adopt health insurance is determined by some factors as shown below;

$$ADOPTION_{Health\ insurance} = \beta_1 + \beta_2 AGE + \beta_3 EDN + \beta_4 INC + \beta_5 SEX + \beta_6 MRTL + \beta_7 HOS + \beta_8 PMA + e$$

Where;

AGE = Age of the people to insure

EDN=Education level of the people

INC= Income of the people

SEX= Sex of the people

MRTL= Marital status

HOS= House hold size

PMA=premium affordability

β_1, β_2.....β_7= coefficient of respective independent variables

e = error term.

3.12.2Ordered probit model

This was used to presents the effect of health insurance on health care utilization. The utilization of health care through health care visits was based on theory of utility in which model was extended by Bolin *et al* (2003). The model individual utility depends on consumption of desired health care service and insurance for individual that is proportional to individual health care service. Individual choice of health insurance for

health care visits is driven by utility maximization. Health care visit is determined by health insurance of individual. Hence, an individual is considered as a consumer of his own health care service. Bolin *et al* (2003) expands this model to include socioeconomic factors. It considered a family utility function. Empirical investigation was conducted in order to test theoretical relationship between health care utilization or health care visits and health insurance**.**

Health insurance is formed not only at the individual level but also at community level Kawachi et al, (2004). Typically the relationship between health insurance and health care visits is estimated using Ordered Probit regression. Provided that the dependent variable is categorical variable the Ordered Probit should be considered. The health care visits as the measure of the health care utilization, the regression to be estimated was as follows:

$$HCV_i^* = \alpha + \beta_1 HI_i + \beta_2 PI + \beta_3 SC_i + e_i \qquad (1)$$

Here HCV_i^* is unobservable dependent variable, which evaluate the state of the health care visits of the individual $\boldsymbol{i}$. Instead its realization HCV_i is a categorical variable that is observed as follows**;**

$$H_i = \begin{cases} 1, HCV_i^* < \mu_1 \\ 2, \mu_1 < HCV_i^* < \mu_2 \\ 3, HCV_i^* > \mu_2 \end{cases}$$

$e_i \in N(0,1)$ - is an error term, which we assume follows standard normal distribution.

Here HCV_i is our categorical dependent variable, which denotes the health care visits*i*

HCV_i is obtained as the answer to the question "How many times do you visit health care facility per month? HCV takes values from one to three, where 1 means "one time visit per month", 2 means "two to three visits per month", 3 – is "More than three visits per month"

HI_i - is the vector of variables, that measure the health insurance of individual *i*

PI_i - is the set of dummy variables that denotes the premium insurance

SC_i - is the vector of socioeconomic characteristics.

Therefore in this regard, Ɛ is threshold variable in the ordered probit model. The threshold variable is unobservable and determined in the maximum likelihood estimation procedure for the ordered probit model. In terms of available data for this study, the first model considered as the latent regression can be formulated as:

$$Y= \beta o + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \ldots\ldots + \beta_{22}X_{22} + Ɛ \ldots\ldots\ldots \text{(ii)}$$

Where Y= Health care visits per month

X_i = Variable

β_i= Coefficient of variable

Where i=1, 2, 3

CHAPTER FOUR
PRESENTATION OF FINDINGS

4.1 Overview

This chapter presents the findings on the influence of health insurance on health care utilization in Njombe District. Both quantitative and qualitative findings are presented. Descriptive statistics give the demographic data and results on the extent of adoption of health insurance among the people in Njombe District. Econometric results present quantitative findings on social economic factors influencing health care utilization and effect of health insurance on health care utilization.

4.2 Descriptive statistics

4.2.1 To describe specific characteristic of households who adopt health insurance

The descriptive statistics were used to describe the basic features of the data employed in the study. The summary of statistics of the data utilized in the study is presented in table 4.1 and 4.12 and its relationship with health insurance adoption. The major variables age, sex, marital status, household dependency, household size, education, average monthly income, economic activities depend mostly.

Table 4.1: Age of respondents and adoption of health insurance

Variable	Criteria	Adopters	Non-Adopters	Total	Percentage (%)
Age	18-30	8	52	60	43.5
	31-40	11	6	17	12.2
	41-50	9	0	9	6.2
	50+	51	1	52	37.4

Source: Field data, 2018

Table 4.1 shows that, 43.5% of respondents fall within 18-30 years where by 8 respondents from age group adopt health insurance while 52 respondents are non adopter of health insurance. 37.4% of respondents fall within 50 and above years where by 51 respondents from the age group adopt health insurance while 1 respondent were non adopter of health insurance. 12.2% of the respondents were

between31-40 years where by 11 respondents from age group were adopters and 6 respondents where non adopters of health insurance. 6.2% of the respondents fall in between the age of 41-50, where 9 respondents adopted health insurance. Considering the findings of the entire sample as revealed on table 4.1, the age of 51years and above adopt health insurance more than youth group in Njombe.

Table 4.2: Sex of respondents and adoption of health insurance

Variable	Criteria	Adopters	Non adopters	Total	Percentage (%)
Sex	Female	45	26	71	51.4
	Male	14	53	67	48.6

Source: Field data, 2018

Table 4.2 shows sex of respondent and adoption of health insurance where 51.4% (71) of the population were female, with 45 who adopted health insurance and 26 who were non adopters of health insurance. 48.6% (67) were male, and 14 among them adopted health insurance while 53 did not adopt health insurance. This means that, female group adopts more health insurance than male group in Njombe district.

Table 4.3: Marital status of respondents and adoption of health insurance

Variables	Criteria	Adopters	Non Adopters	Total	Percentage (%)
Marital status	Married	79	0	79	57.20%
	Single	0	59	59	42.80%

Source: Field data, 2018

Table 4.3 shows that 57.2% (79) of respondents were married and adopted health insurance while 42.8% (59) of respondents were single and did not adopt health insurances. This means that married group adopted more health insurance than Single due to fact that married group has many dependent such as children, and spouses who rely on them than single. Thus married people adopt more health insurance to avoid risks of diseases as well as reduce the burden of dependency on health care utilization.

Table 4.4: Educational background and adoption of health insurance

Variables	Criteria	Adopters	Non adopters	Total	Percentage (%)
Education Background	None	2	28	30	21.7
	Primary Education	1	29	30	21.7
	Secondary Education	9	1	10	7.2
	Diploma	35	0	35	25.4
	Degree	32	1	33	23.9

Source: Field data, 2018

Table 4.4 shows that 21.7% of respondents have not been in school where by 2 respondents adopted health insurance and 28 respondents were non adopters. 21.7% respondents completed primary education where 1 respondent adopted health insurance and 29 respondents were non adopters. 7.2% of respondents completed secondary education where 9 respondents from the group adopted health insurance and 1 was non adopters. 25.4% of respondents completed diploma education level where by 35 of respondents adopted health insurance. 23.9% of respondents completed degree education level where by 32 respondents adopts health insurance and 1 respondent was a non adopters of health insurance. The results shows that those with diploma and degree level of education are the ones who mostly adopt health insurance than none educated, and those with primary and secondary level of education. This can be due to fact that educated people know the importance of being insured than non educated people, and thus imply that level of education can influence the use health insurance on healthcare utilization

Table 4.5: Household size and adoption of health insurance

Variable	Criteria	Adopters	Non adopters	Total	Percentage (%)
Household size	1-5	47	56	103	74.6
	6-10	29	1	30	21.7
	11-15	2	2	4	2.9
	16 +	1	0	1	7

Source: Field data, 2018

Table 4.5 shows that household size of 1-5 was (103)74.6% of the population, where 47 respondents adopted health insurance and 56 were non adopters. In families with 6-10 households members were 21.7%, where 29 respondents adopted health insurance while 1 respondent was non adopter. In 11-15 household size, there were (4) 2.9% of the total population where by 2 respondents adopted health insurance and the remained 2 were non adopters. Finally the families with 16 and above members were 7% (1) and that 1 respondent adopted health insurance. The results imply that large number of household size in a family affect the possibility of adopting health insurance. This could be because of household head might not be able to afford providing health insurance to each member if the family size is large.

Table 4.6: Household dependency and adoption of health insurance

Variable	Criteria	Adopters	Non adopters	Total	Percentage (%)
Household dependency	1-3	63	54	117	84.8
	4-6	15	5	20	14.5
	7-9	1	0	1	7

Source: Field data, 2018

Table 4.6 shows that household dependent of 1-3 was (117) 84.8% of population where 63 respondents adopted health insurance and 54 were non adopters of health insurance. In families with 4-6 dependants there were (20) 14.5%, whereby 15 respondents adopted health insurance and 5 respondents were non adopters.7% of respondents were from 7-9 dependency group where by 1 respondent adopt health insurance while the remained were non adopters. The results show that families with large number of dependants do not adopt health insurance. This might be due to limitation of required numbers of dependants in health insurance institution such as NHIF requires only 6 members.

Table 4.7: Average monthly household income and adoption of health insurance

Variables	Criteria	Adoption	Non adoption	Total	Percentage (%)
Household income	10000-100000	29	51	80	58
	100001-200000	16	3	19	13.8
	200001-300000	15	3	18	13
	300001+	19	2	21	15.2

Source: Field data, 2018

Table 4.7 shows that out of the entire population there are 58% (80) of household with income of between 10000 and 100000TZS per month were 29 respondents adopted health insurance and the remained 51 respondents were non adopters of health insurance. 13.8% (19) of respondents were in the income level between 100001 and 200000TZS per month, out of 19 respondents, 16 adopted 3 did not adopt health insurance. 13% of respondents were between 200001 and 300000TZS per month with15 respondents adopted health insurance and 3 respondents as non adopters of health insurance. Lastly, respondents with an income level between 300001 and above were 15.2% (21), with 19 respondents who adopted health insurance and 2 respondents who were non adopter. The results show that household income has influence in adoption of health insurance in Njombe district, however the study revealed that the ones with low income level were adopted more health insurance such as CHF than those with higher income. This might be because they fear the risk and uncertainty of diseases compared to those with high income who might have low fear on the risk that might be associated such as not having enough money at the time of sickness or enough money treat disease.

4.2.2 Source of income

The results for the respondents on the source of their income showed that, the major source of income was from farming activities (43%) followed by profit from business (33.3%) then worker wages (21.7%) and lastly was government income such as pension (2.2%). The results shows that the respondents depend more in farming activities as the source of income as indicated in Figure 4.1, this findings is

of no surprise as Njombe district is the district which is popular in agriculture and the residents depend more on farming activities such as Irish potatoes and maize production

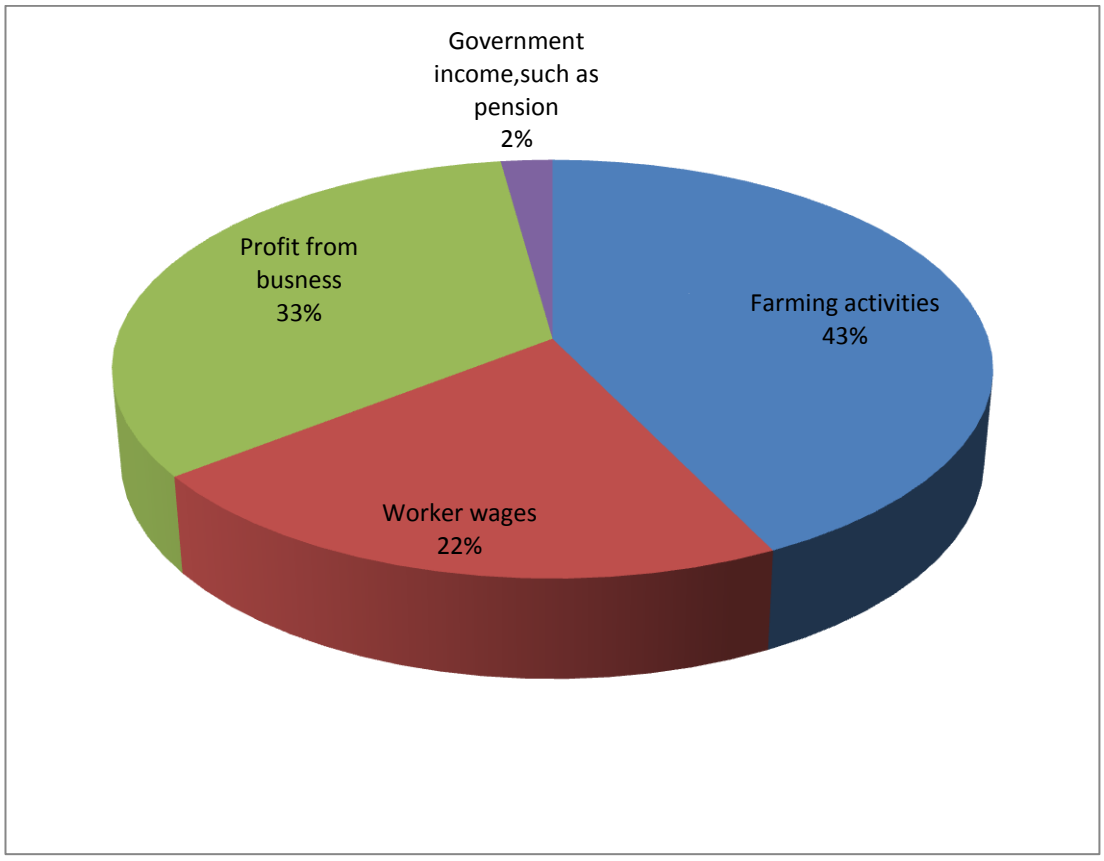

Figure 4.1: Economic activity depends on mostly

Source: Field data, 2018

4.2.3 The extent of adoption of health insurance among the people in Njombe district

The first objective of this study was to examine the extent of adoption of health insurance in Njombe district. The respondents were asked if they adopted or not adopt health insurance .The results in table 4.8 shows that out of 138 respondents, it was revealed that 57.2 % adopted health insurance while 42.8% of respondents were non adopters of health insurance. This means that, large percentage of respondents had adopted health insurance and the remained did not adopt health insurance. The reason of not adopting health insurance might be caused by the lack of education on

the importance of having health insurance and ability to afford the payment of required premium lay down by health insurance fund due to low income.

Table 4.8 Adoption of health insurance among the people in Njombe district

Variable	Criteria	Frequency	Percentage (%)
Adoption of health insurance	Adopters	79	57.2
	Non Adopters	59	42.8
	Total	**138**	**100**

Source: Field data, 2018

4.3 Econometric results

This section presents the findings of the econometric analysis to archive the objective of examining social economic factors influencing adoption of health insurance in Njombe District and the effect of health insurance on health care utilization. Probit model and 0rdered probit model used to analyse the two objectives. The results indicated in table 4.10 and 4.12 below;

4.3.1 The effect of Social-economic factors influencing adoption of health insurance in Njombe District

The second objective of the study was to examine the effect of social economic factors influencing adoption of health insurance in Njombe district. This objective was analyzed by using probit model in STATA version 13. In this study respondents were asked to answer yes or no response to adoption of health insurance. This is because it is only possible to predict the probability statements about the binary responses on ‘yes’ or ‘no’. The dependent variable set up in the analysis was health insurance adopters while independent variables were age of household, sex, household dependency, household size, household income, premium affordability, and education.

Table 4.10: The effect of Social-economic factors influencing adoption of health insurance using Probit regression model results

Variables	Coef.	Std. Err	Z	P>/z/	Marginal effect
Age of respondents	3.296825**	1.412651	2.33	0.020	0.111608
Diploma education	2.93854***	1.099315	2.67	0.008	0.5463839
Secondary education	-0.6905932	1.73631	-0.4	0.691	-0.2598064
Primary Education	-1.958332*	1.201546	-1.63	0.103	-0.6723311
Household Dependency	1.559163*	0.868956	1.79	0.073	0.5257113
Household Size	1.327094*	0.651534	2.04	0.042	0.4474633
Income level	0.4450824*	0.275101	1.62	0.106	0.1500708
Premium affordability	-1.852013*	1.064499	-1.74	0.082	-0.62445333
Sex	-0.5569441	0.886717	-0.63	0.53	-0.1853342
_cons	-16.04759***	5.978052	-2.68	0.007	

N =138
LR $chi^2(9)$=168.23
Prob> chi^2=0.0000
Log likelihood= -10.0853
PseudoR^2 =0.8929
* ** *** represents significance level at 1%, 5%, 10% respectively.

Source: Field data, 2018

Table 4.10 presents the coefficients, standard error, z score, significant value log likelihood, marginal effect, chi-square, pseudo R square and number of observation. The estimated results showed the likelihood ratio chi-squire θ of -10.0853 with p-value of 0.0000 meaning that the joint significant test of all the variables in the model is significant at 1%. This implies that all variable are correctly predicting the model. It further imply that, null hypothesis is rejected that, age of household, sex, household dependency, household size, household income, premium affordability, and education level do not influence adoption of health insurance.

From the results, household dependency, household size, education level, age, income level and premium affordability were found to be significant and these are the factors that influenced household to adopt health insurance.

From table 4.10 shows that household dependency was statistically significant at 10% and significant level has positive impact on adoption of health insurance in Njombe district. Income level was statistically significant at 10% and has positive impact on adoption of health insurance. Depending on premium affordability was statistically significant at 10% (0.082) and has negative impact on adoption of health insurance. Household size was statistically significant at 5% (0.042) and has positive impact on adoption of health insurance. Depending on education level and income were statistically significant at 1% (0.008) and 5% (0.020) respectively.

4.3.2 Health insurance and socioeconomic factors influencing health care utilization

4.3.3 Ordered probit results

The results of the ordered probit regression model estimating effect of health insurance and socioeconomic factors influencing health care utilization as presented in table 4.11. The fit of the data was statistically significant with P-value 0.0000 at (P < 1%). The accuracy of the prediction (Pseudo R2) was 0.1796 equivalents to 18% while the Wald Chi2 (12) = 66.19.

Table 4.11: General Fitness of the model

Number of Observation	138
Wald Chi2 (19)	65.5
Prob > Chi2	0.0000
Pseudo R2	0.1796
Log pseudolikelihood	-126.15317

In estimating the health insurance and socioeconomic factors influencing health care utilization in which researcher measured health care utilization in term of number of health care visits per months as indicated in Table 4.10.

Table 4.12: Ordered Probit Regression Results

Health care utilization (Number of visits)	Coefficient	Robust Std. Err.	Z	P>z
LnAge	-0.49313	0.4829	-1.02	0.307
Sex	0.184102	0.2513	0.73	0.464
Informaleduc	0.097219	0.4181	0.23	0.816
Primaryeduc	0.258443	0.4397	0.59	0.557
Secondaryeduc	0.503723	0.4606	1.09	0.274
Diplomaeduc	-0.49456	0.3366	-1.47	0.142
Married	1.07683*	0.5646	1.91	0.057
LnHhsize	-0.08025	0.1907	-0.42	0.674
LnIncome	-0.2488**	0.0970	-2.56	0.011
LnDistanceA	-0.5652**	0.1940	-2.91	0.004
Healthinsurance	0.55243**	0.2363	2.34	0.019

*, ** & *** represent 10%, 5% & 1%Level of significance respectively

4.3.4 Marginal effect results of ordered probit

Marginal effects shows the change in probability when the predictor or independent variable increases by one unit. For continuous variables this represents the instantaneous change given that the unit may be very small. Table 4.10 shows the parameter estimates (coefficients) and table 4.11 indicates marginal effects at the means of the Ordered Probit regression with their respective robust standard errors.

Table 4.13: Marginal effect Results of Ordered Probit Results

Health care utilization (Number of visits)	Less than two day per month		Two to three days per month		More than three days per month	
	dy/dx	Std.Err	dy/dy	Std. Err.	dy/dx	Std.Err
LnAge	0.0752	0.0750	-0.0460	0.0460	-0.1048	0.1014
Sex	-0.0248	0.0381	0.0153	0.0241	0.0348	0.0523
Informaleducation	-0.0176	0.0731	0.0098	0.0375	0.0233	0.0933
Primaryeducation	-0.0498	0.0924	0.0246	0.0377	0.0624	0.1082
Secondaryeduc	-0.1094	0.1370	0.0399	0.0345	0.1235	0.1400
Diplomaeducation	0.0457*	0.0241	-0.0433	0.0314	-0.0875	0.0540
Marital married	-0.1113**	0.0564	0.0874*	0.0485	0.2018**	0.1046
LnHousehold size	0.0106	0.0285	-0.0065	0.0173	-0.0148	0.0398
LnIncome	0.0374*	0.0198	-0.0229**	0.0112	-0.0521**	0.0216
LnDistance from health facility	0.0859**	0.0390	-0.0525**	0.0206	-0.1196**	0.0467
Healthinsurance	-0.0684*	0.0402	0.0494*	0.0260	0.1088**	0.0489

*, ** & *** represent 10%, 5% & 1% Level of significance respectively

The independent variables including diploma education, marital married, lnincome, lndistance Health insurances were statistically significant influencing health care utilization in study area. However the magnitude and sign of variables varies across alternatives or outcome of health care utilization. Therefore attention in interpreting the ordered probit results is actually needed to ensure correctness and precisely. However Lnage, informal education, primary education, secondary education, LnH ousehold size and premium insurance do not influence health care utilization or were not statistically insignificant influence health care utilization in study area.

On the other hand, to avoid repetition in discussions, the results of the marginal effects are only discussed as they can indicate both the sign and magnitude of each variable in the model. An additional insight is also provided by analyzing the

marginal effects, which were calculated as the partial derivatives of the non-linear probability function, and evaluated at each variable sample mean.

Nevertheless, in an attempt to measure this, the researcher wanted to know if number of visits per month in health facilities is influenced by health insurance. In this regards, socioeconomic factors and health insurance were regressed with the number of visitor in health centres which is less than two per month.

In secondary outcome, socioeconomic factors and health insurance were regressed with health care visits between two and three per month. Lastly, socioeconomic factors and health insurance were regressed with health care visits in more than three times per month.

Based on findings marital status was significantly effect on health care utilization as presented in table 4.13. It was found that marital status was significant at 5% 1% and 5% level of significance at choice one, choice two and choice three respectively. Likewise married respondent had probability of -0.1113 for individual visited health care facilities less than one time per month, 0.0874 for individual visited health care facilities two to three times per month and 0.2018 for individual visited health care facilities more than three times per month. Being married had high probability of visiting health care facility by two or more than two times per month while lower probability had reported to individual visiting health care facility for one time per month.

The diploma education was significantly effect on health care utilization as indicated in theory of rational choice. The diploma education was significant at 10% level of significance for only those who visited health care facility one time per month. Probability of diploma education being visited health care facility one time per month was 0.0457. This suggests that individual with diploma education had high probability of visiting health facility by one time per month.

The household income was significantly effect on health care utilization as presented in table 4.13. The household income was significant at 10% 5% and 5% level of significance for individual visited health facility one time per month, individual

visited health facility two to three times per month and individual visited health facility more than three times per month respectively.

Similarly household income had probability of 0.0374 for individual visited health care facilities less than one time per month, 0.0229 for individual visited health care facilities two to three times per month and-0.0521 for individual visited health care facilities more than time per month. Therefore the high income household had high probability of visiting health care facility two to three times or less than one times per month while lower probability had reported to individual with low income who visited health care facility for more than time per month.

The distance was significantly effect on health care utilization as presented in table 4.13. The coefficient of distance was significant at 5% level of significance for individual visited health facility one time per month, individual visited health facility two to three times per month and individual visited health facility more than three times per month. In the same way distance had probability of 0.0859 for individual visited health care facilities less than one time per month, 0.0525for individual visited health care facilities two to three times per month and-0.1196 for individual visited health care facilities more than time per month. In addition individual who came from long distance had high probability of visiting health care facility for less than one times per month or two to three times while lower probability had reported to individual who visited health care facility for more than three times per month.

Table 4.13 presented that health insurance is significantly effect on health care utilization. As it is explained in theory of rational choice, health insurance was found to be significant at 1% 1% and 5% level of significance for individual visited health facility one time per month, individual visited health facility two to three times per month and individual visited health facility more than three times per month respectively. Moreover health insurance had probability of -0.0684 for individual visited health care facilities one time per month, 0.0494 for individual visited health care facilities two to three times per month and0.1018 for individual visited health care facilities more than three times per month. The individual who are insured had lower probability of visiting health care facility one times per month while higher

probability had reported to individual visiting health care facility for two or more times per month.

4.4. Model specification model

Table 4.14: Model Specification Test

Health care utilization	Coefficient	Std. Err.	Z	P>z	[95% Conf.	Interval]
_hat	1.1849	1.1739	1.01	0.313	-0.4821	7.7581
_hatsq	-0.0212	0.1338	-0.16	0.874	-1.1238	0.2433
/cut1	-6.4192	2.5391			-11.3959	-1.4426
/cut2	-4.2783	2.5306			-9.2384	0.6816
/cut3	-3.8923	2.5269			-8.8451	1.0604

Source: (STATA Output, 2018)

Based on findings model specification is important aspect in econometric analysis and must be suitably specified. Notably if it is not suitably specified the analysis result may encounter a problem of model specification error or model specification bias, Damodar and Porter (2009). The study conducted the test for specification using Linktest command in Stata version 13.

Before coming into conclusion, Ho: Model is well specified and Ha: Model is not well specified. Since probability (P>|t|) of hatsq was 0.874, then it was greater than 5% level of significance, then the t-test of the hatsq is insignificant. This gives sufficient information to fail to reject Ho and therefore the model is not well specified as indicated in Table 4.12

4.5 Correlation analysis

Table 4.15 establishes correlation result between independent variables and dependent variables. The individual independent variable correlated with dependent variable which is health care utilization. There were twelve independent variables involved and result presented which are InAge, Sex, informal education, primary education secondary education, diploma education, marital status, LnHousehold, Lnincome, LnDistance and Premiam insurance.

Table 4.13: Correlation analysis

	Healthcare	lnAge	Sex	iformaleduc	Primaryedu	Primaryedu	Secondarye	Diplomaedu	Married	lnHhsize	lnIncome	lnDistance/	PremiumF
Healthcare	1.00												
lnAge	0.27	1.00											
Sex	-0.04	-0.54	1.00										
iformaleduc	-0.23	-0.48	0.23	1.00									
Primaryedu	-0.23	-0.50	0.30	-0.28	1.00								
Secondarye	0.16	0.24	-0.18	-0.15	-0.15	1.00							
Diplomaedu	0.07	0.53	-0.30	-0.31	-0.31	-0.16	1.00						
Married	0.45	0.83	-0.43	-0.54	-0.57	0.19	0.50	1.00					
lnHhsize	0.17	0.76	-0.44	-0.38	-0.40	0.26	0.48	0.66	1.00				
lnIncome	0.12	0.57	-0.41	-0.42	-0.26	0.24	0.41	0.55	0.46	1.00			
lnDistance/	-0.46	-0.75	0.43	0.49	0.50	-0.21	-0.49	-0.87	-0.61	-0.59	1.00		
Healthinsu	0.39	0.32	-0.06	-0.21	-0.21	0.12	0.18	0.42	0.18	0.33	-0.35	1.00	
PremiumF	0.24	0.16	0.04	-0.13	-0.16	0.16	-0.02	0.25	0.07	0.10	-0.18	0.17	1.00

In summary, results of analysis of the correlation between lnage variable and lnhousehold size was 0.76 and remained the most highest correlation with health care utilization. While the lowest correlation was found between lnhousehold size variable and health insurance variable. All other variables had correlation in between lowest and highest reported variables.

CHAPTER FIVE
DISCUSSION OF THE FINDINGS

5.1 Overview

The major objective of the study was to analyze health insurance and its effects on health care utilization. This chapter provides the discussion on findings based on chapter four (4) in relation to the study area, findings from other similar studies and the conclusion of the study. Specifically, the chapter provides complete discussion on the extent of adoption of health insurance, social economic factors influencing health care utilization, and the effect of health insurance on healthcare utilization in Njombe district.

5.2 The extent of adoption of health insurance among the people in Njombe district

This section attempts to assess empirically the first specific objective of the extent of adoption of health insurance among the people in Njombe.

Based on findings the result shows that most of the respondents adopted health insurance. 57.2% (79) out of 138 respondents adopted health insurance while 42.8% (59) of respondents were non adopters of health insurance. This means that, majority of respondent's uses health insurance in attaining free and quality services from health facilities. Those who do not adopt health insurance faced with different problems in accessing health services. This might be paid money before getting treatment or service in the hospital which could be bad if you don't have money and you are sick.

This result is similar with the results obtained by Sohn and Jung (2016) who analyzed the effect of public and private health insurance on medical service utilization of the national health insurance system in Korea. Their study found that people who are covered with health insurance both medical aid and private health insurance was respectively 2.38 and 1.25 times more likely to received inpatient care and outpatient care. The study shows that people who received good inpatient and outpatient services are those who have health insurance. Also Liu *et al* (2012)

analyzed the study which aimed to evaluate and compare equity in access of health care utilization in China and Vietnan. They found different results with the present study. Their findings showed that, health insurance adopters has no significant on outpatient service utilized. This is due to bureaucratic obstacles, low reimbursement rate, and low quality. These barriers caused health insurance member in China failed to adopt health insurance.

5.3 The effect of social-economic factors influence adoption of health insurance in Njombe district

Based on the findings on social-economic factors influencing adoption of health insurance by using probit model confirmed that; age, sex, household dependency household size income level, and education level were influential factors for adopting health insurance in Njombe district.

Household dependency was statistically significant and positively relating to adoption of health insurance in Njombe district. This indicates that the probability of a person to adopt health insurance increases with household dependency. The marginal effect of household dependency is 0.5257113, this implies that increase of one unit of people or children in a house can lead to increase rate of adopting health insurance by 52%, means that the higher the number of people depending to the household head, the higher the number of people adopting health insurance. This is due to fact that household head was able to afford to pay for health insurance to each unit. This result is different with the result obtained by, Gakii (2013) who investigated the role of health insurance on health status, health care utilization, and health care provider choice in Kenya. The study found that an additional of household dependency reduce probability of adopting health insurance. This implies that the larger the household dependency the less they will adopt health insurance. Therefore this happens if income of house hold head is not enough for adoption of health insurance.

Sex of household, the results shows that, sex was statistically significant and negative effect on adoption of health insurance. Being a male reduce the probability of adopt health insurance. The marginal effect of sex is -0.185334. This indicates that

women adopted more health insurance than men. The increase in number of men in each unit can lead decrease adoption of health insurance by 18%. The result was similar with the result obtained by Wang *et al* (2017), who did a study on impact of Health insurance on maternal health care utilization for, Ghana, Indonesia, and Rwanda. Their study found that women are positive and statistical significant with health insurance adoption. This because women who adopted health insurance are more likely to have three or more prenatal checkups, to deliver at hospital they received professional assistance during birth and received postnatal checkups and vaccination for children. In addition women who adopted health insurance were associated with knowledge and skills that they have.

The results show that, premium affordability increases rate of adoption of health insurance among the people in Njombe district. The premium affordability has statistical significant and negatively affecting adoption of health insurance. This means that the respondents who consider the premium to be affordable were more likely to adopt health insurance compared to their opposite number who consider to unaffordable. The marginal effect of premium affordability shows that those who considered the premium affordability are more likely to report increase adoption by 62% units than otherwise. This result is similar with the results obtained by Macha *et al.* (2014) who assessed the determinants of community health fund membership in Tanzania using mixed method approach. Their study found that if premium is fair and affordable have positive relation to people who adopted health insurance. This means that decrease of premium affordability increases rate of adoption of health insurance in Kigoma and Mbulu district.

Income level has positive sign and statistically significance on adoption of health insurance among the people in Njombe district. The probability of individual to adopt health insurance is increase with income. The positive sign means that, people with higher income are more likely to adopt health insurance compared to people with lower income. Marginal effect of income is 0.15007, this means that increase of one unit of average monthly income will increase the possibility of adopting health insurance by 15%. The result is similar with the results obtained by Shimeles (2010)

who conducted the study on Community health insurance schemes in Rwanda. The study found that the higher income people (richer) the higher the adoption of health insurance than the lower income people (poor).Also Shin *et al* (2015), Examined the factors determining children's private health insurance enrolment and children's health care utilization in Korea. They found that the higher household income was the factor influencing adoption of health insurance in Korea. In addition the results obtained by Comfort *et al*, (2013) who conducted the study on the effect of health insurance on the use and provision of maternal health service and neonatal health outcome in Sub Saharan Africa including Asia, Latin America and Turkey. Their study found that low income of individual causes people to fail to adopt health insurance where higher income level adopted health insurance and got quality service.

Age of respondents was statistically significant and positive correlated with adoption of health insurance. This implies that an additional as a person become older increases possibility of adopting health insurance. The marginal effect of age is 0.11160; this means that the increase of one unit of age leads an increase of adopting health insurance by 11%. From the results 38% of respondents were aged 51 and above adopted more health insurance, where the lower the age the lower the adoption of health insurance. The results is not similar with the results obtained by Shin *et al* (2015), who examined the factors determining children's private health insurance enrolment and children's health care utilization in Korea. Their findings show that children are the one who adopted more health insurance and they are enrolled by their parents than older age.

5.4 Socioeconomic factors influencing health care utilization

Based on the findings on social-economic factors influencing health care utilization using ordered probit model confirmed that diploma education, marital married, lnincome and lndistance were significantly influencing health care utilization while other factors such as age, sex, informal education, primary education, household size and premium were statistically insignificant influencing health care utilization. Thus, only socioeconomic significant factors were discussed.

The marital status was significantly effect on health care utilization as presented in table 4.11. It was found that marital status was significant at 5% 1% and 5% level of significance at outcome one, outcome two and outcome three respectively. Likewise married respondents had probability of -0.1113 for individual visited health care facilities less than one time per month. This implies that probability of visiting health care facilities less than one time per month was decreasing by 11.13% for individual in choice one. Surprisingly probability of visiting health care facilities two to three times per month was increasing by 8.74% for individual in choice two .Similarly the probability of visiting health care facilities are more three times per month was also increasing by 20.18% for individual in choice three. These indicate that a married respondent had lower probability of visiting health care facilities one time per month. While high probability of visiting health care facilities had reported for individuals who visited health care facilities for two times or more than two times per month. This result is similar with the results obtained by Abu-Bakari *et al* (2016), examine the effect of health insurance on health care utilization in Malaysia. Their study found that people who are married are more likely to access health care, the results also supported by Gakii, (2013), who investigated the role of health insurance on health status, health care utilization, and health care provider choice in Kenya. The study found that people who are single have less likely to seek health care services compared to married group

The diploma education was significantly effect on health care utilization as indicated in theory of rational choice. The diploma education was significant at 10% level of significance for only those who visited health care facility one time per month. Probability of diploma level of education being visited health care facility one time per month was 0.0457. This indicate that individual with diploma level of education had high probability of visiting health facility one time per month. Therefore this result is different with the results obtained by Gakii (2013) who investigated the role of health insurance on health status, health care utilization, and health care provider choice in Kenya. The study found that education level reduces the probability of a person to visit private clinic for getting health care services. Due to literacy level of people they failed to determine medical care that would improve their health best

especially in an occurrence of serious illness which is cheaper to get treatment in a government health facilities if you have health insurance than other place. In addition the study of Shin *et al* (2015), Examined factors determining children's private health insurance enrolment and children's health care utilization in Korea. Their study found that parents education level increase the probability of children to utilize health care services. This because their parents education level is high hence they know the importance of utilizing health care.

The household income had significantly effect on health care utilization as presented in table 4.11. The household income was significant at 10% 5% and 5% level of significance for individual visited health facility one time per month, individual visited health facility two to three times per month and individual visited health facility more than three times per month respectively. Correspondingly household income had probability of 0.0374 for individual visited health care facilities less than one time per month, 0.0229 for individual visited health care facilities two to three times per month and-0.0521 for individual visited health care facilities more than time per month. Therefore high income household had high probability of visiting health care facility two to three times or less than one times per month while lower probability had reported to individual with low income who visited health care facility for more than time per month. This is supported by Shimeles (2010) who conducted the study on Community health insurance schemes in Rwanda. The study found that people with higher income can increase health care utilization more than people with low income that is poor. The results also obtained by Comfort *et al*, (2013) who conducted the study on the effect of health insurance on the use and provision of maternal health service and neonatal health outcome in Sub Saharan Africa including Asia, Latin America and Turkey. Their study found that low income of individual causes people to fail to get better health care services where higher income level got quality health care service.

Basing on the results distance had significantly effect on health care utilization. The coefficient of distance was significant at 5% level of significance for individual visited health facility one time per month, individual visited health facility two to

three times per month and individual visited health facility more than three times per month. In the same way distance had probability of 0.0859 for individual visited health care facilities less than one time per month, 0.0525for individual visited health care facilities two to three times per month and-0.1196 for individual visited health care facilities more than time per month. Therefore individual who came from long distance had high probability of visiting health care facility for less than one times per month or two to three times while lower probability had reported to individual who visited health care facility for more than three times per month. The results is supported by Comfort *et al*, (2013) who conducted the study on the effect of health insurance on the use and provision of maternal health service and neonatal health outcome in Sub Saharan Africa including Asia, Latin America and Turkey. Their study found that accessibility of provider within a provider transport cost especially in rural areas can limits ability of people to seek and receive health care when needed, due to long distance from service.

5.5 Effect of health insurance on health care utilization

This section attempts to assess empirically the third specific objective which is the effect of health insurance on health care utilization in Njombe. In which health insurance was analyzed with a focus to understand effect on health care utilization. The analysis had indicated that only health insurance was statistically significant influencing health care utilization. Other variables have p-value which is greater than 1%, (0.001) 5% (0.05), 10% (0.1) found to be not significant affect health care utilization. Thus, only health insurance was discussed.

In rational choice theory, it was expected that health insurance to be significantly influencing health care utilization. Similarly several previous studies have also predicted that insurance increases health care utilization and therefore most individual would prefer to have insurance for their health services utilization.

However, finding had shown that health insurance had significantly effect on health care utilization. As it explained in theory of rational choice, health insurance was found to be significant at 1% 1% and 5% level of significance for individual visited health facility one time per month, individual visited health facility two to three

times per month and individual visited health facility more than three times per month respectively. Also health insurance had probability of -0.0684 for individual visited health care facilities one time per month, 0.0494 for individual visited health care facilities two to three times per month and 0.1018 for individual visited health care facilities more than three times per month. The individual insured had lower probability for visiting health care facility one times per month while higher probability had reported to individual who visited health care facility for two or more times per month. In other word, people with health insurance had more visits per month at health care facilities therefore this increase health care utilization in comparison with people without health care. Individual with insurance do not seek for immediate pocket money once visit health care facility unlike one who do not have health insurance.

The individual who expect to consume more health care was more likely to buy health insurance than those who does not expect to use little healthcare utilization. The results act in accordance with the expected utility theory, where the decision to purchase or adopt health insurance is explained by expected utility that is, demand is a choice between uncertain loss occur with a possibility when insured and certain loss like paying a premium (Jowett 2007) the theory allows insured to attain higher utility in case of illness than those with no health insurance. Therefore in an expected utility demand for health insurance and healthcare utilization is something which is interdependence. The individual who expect to consume more health care was more likely to buy health insurance than those who does not expect to use little healthcare utilization.

The present finding conquer with are Agyemang and Osei (2017) who examined the influence of health insurance status on people's health seeking behaviour in rural Ghana. They found the similar results that people who adopt health insurance have statistical significant influence on healthcare utilization where by people who adopt health insurance are more likely to attend to health care facilities and get service than those who did not adopt health insurance. Also it was supported by Shimeles (2010) who conducted the study on Community health insurance schemes in Rwanda. The

study found the same results that membership of health insurance has the potential increase of health care utilization than the non-member or people who are not adopt health insurance. Insured people have lower probability of experience catastrophic expenditure compare to uninsured people. Lastly the study of Kihaule (2014) who conducted a study on the impact of rural household's member in micro health insurance on utilization of health care service in Tanzania. The findings shows that membership in health insurance plan increased the utilization of health services among the poor households in rural areas.

Therefore the finding on health insurance influencing health care utilization indicated that health insurance was significantly influencing health care utilization or health care facility visits. Individual with health insurance had more visits per month at health care facilities and that abruptly increase health care utilization in comparison with people without health care.

CHAPTER SIX
SUMMURY, CONCLUSION AND POLICY IMPLICATION

6.1 Overview

This chapter presents the summary, conclusion as well as policy implication of the study. This chapter is divided into three sections. The first section summarizes the results and conclusion of the entire study, second section presents the implication of the study, and the areas for further study and the last section provides the limitation of the study.

6.2 Summary and conclusion

The main objective of the study was to examine the influence of health insurance on healthcare utilization. Specifically the study aimed to know the extent of adoption of health insurance, social economic factors influencing adoption of health insurance and the effect of health insurance on healthcare utilization in Njombe district. To archive this, study used cross sectional data which was obtained from 138 respondents in Njombe district.

Structured questionnaire was administered to collect primary data from the respondents in the villages. Also descriptive statistics was used to describe the extent of adoption of health insurance, probit model and ordered probit model was used to obtain the variables of social economic factors influencing adoption of health insurance, and effect of health insurance on healthcare utilization respectively.

The results on the extent of adoption of health insurance among people in Njombe district showed that, mostly the respondents adopted health insurance. 57.2% (79) out of 138 respondents adopted health insurance while 42.8% (59) of respondents were non adopters of health insurance. In income level of 58% of respondents ranged between 10000TZS and 100000 TZS per month. 29 respondents adopted health insurance while 51 respondents were non adopters. The results found that 51 of respondents considering level of their monthly income, they cannot adopt health

insurance due to financial problem faced. In addition source of income for 42.8% of respondents is farming activities which they depend more, especially Irish potatoes and maize production.

Furthermore the findings from Probit model shows that household dependency, household size, income level, sex, age, and education level are social economic factors influencing adoption of health insurance as well as health insurance, distance and education level of people are the effect of health insurance on health care utilization as shown in ordered probit.

The study concludes that, adoption of health insurance increasing health care utilization to inpatients and outpatients, by paying zero prices during service time. In addition health insurance encourages demand and enables people with health insurance to utilize more and more health care services. Therefore increasing coverage is very essential on health care utilization.

6.3 Implications

6.3.1 Policy implication

Based on the empirical findings, the study draws the following policy implications that can be used in addressing the influence of health insurance on health care utilization in Njombe district.

The government and other stakeholders should create conducive environment which will help in implementation of the scheme, through mobilize and sensitize people to adopt health insurance, provision of education in each ward or village in order to attain universal coverage for health care service. Basing on the findings that 61.9% of respondents were aware of the health insurance but most of them they are aware but they do not have health insurance.

58% of the respondents agreed that they don’t have enough fund to go with health insurance adoption due to this, 21 respondents who adopted health insurance are ranged between 10000 TZS and100000TZS and 51 respondents they don’t adopt health insurance due to financial difficulty. Due to this government should build

atmosphere to influence financial institutions to regulate and simplify conditions which will reduce the amount of premium per month. This helps each person who is aware of health insurance to copy with the premium in order to increase adoption of health insurance and brings positive impact on health care utilization.

The government and other stakeholders should put different strategies which will be used to increase income to the people and use the same strategies to eradicate poverty in order to improve economic status of the community. Based on the findings that income level was significant and positively influencing adoption of health insurance but the situation is disappointing because, majority of people adopted health insurance but the income level per population is very low. Therefore through having different strategies will increases adoption and increase utilization of health care service at the same time they can be able to invest in agriculture and trade activities which will increase their income.

The government and other stakeholders should provide knowledge to the people in relation to effect of health insurance on health care utilization. This includes advantage of having health insurance in utilizing health care services, increasing awareness to community through knowing the procedure to follow when they want to join in health insurance and diseases which is covered by the health insurance card. This is due to fact that other community who are joining with Community Health Fund and pay 10000 per year, they need to get treatment to all diseases, and get service to both private and government hospital.

Due to low education people think that if they pay ten thousand per year and got insurance card they will use that card in all hospital. When they go to private hospital and don't get service they feel bad, some of them they stop using health insurance card in health care services, all because they don't have knowledge on the use of it. Therefore through provision of knowledge it will help community member to understand well about health insurance, and will attract them to have health insurance card hence increases utilization of health care services to the community.

In addition the government and stakeholders should use advertisements in Radio, Television, and newspaper, to spread education about health insurance and shows all instruction and procedure to go through when they want to join with health insurance.

The government should insist and formulate policy that will require the institutions to increase number of dependents. Health insurance institutions such as NHIF should increase number of members that can be covered by the insurance so as to increase healthcare utilization. Currently NHIF requires only 6 members including household head and five dependants.

The government should expand boundaries for using Health insurance card especially in Community Health Fund (CHF) to different hospitals and places, in order to increase healthcare utilization in everywhere and not in original locality where they registered. The CHF card should be used to all hospital including government and private hospitals and not be in government only specifically one health centres which you have registered only. Through doing this will help to minimize illness cost of people when they are outside of the registered area. This will also discourage out of pocket payment to the people especially when they are out of the place which they registered and got services when they need health services hence increase healthcare utilization.

The government and other stakeholders should make sure that medicines are available in health centres and constantly supplied to health centres at a time. This will reduce the problem of medicine in hospitals where people can only get service but they don’t get medicine, improvement of health facilities, and service deliverers to be available to the people in order to reduce the waiting time. In addition health services must be near to the localities in order to minimize transportation cost to the people and make the service affordable to every community.

The government and development stakeholders should give instruction to all hospitals that insured people must be given first priority in utilizing health care services. This will encourage people to find insurance card, and make everyone see the benefit of being insured and make decision, through putting insured people in separate section at the health centre so that they can see the importance of remaining insured. This because there are people who are discouraged by poor service offered to health insurance members hence they fear to adopt health insurance.

Further subsidization from government, flexibility of collection and differentiation of the scheme coverage depend on the capability of the consumer can also help to contain the situation where some people cannot afford to pay. This means that large percentage of the population is still poor they need to be capacitated in all ways.

Premium affordability was also statistically significant for health insurance users and brings positive impact on health care utilization in Njombe district according to the study findings. For that reason the government should make it more affordable to the people who cannot afford it by making it flexible.

The study contributes to the literature on the influence of health insurance on healthcare utilization. Thus the results of this study would increase understanding on the influence of health insurance on healthcare utilization to the informal sector population and develop measures to serve the higher risked people. Varies studies have been contributed in the same field and all contribute a lot in social security area.

Therefore police makers and other stakeholders should consider using these study findings for improvement in areas which are weak. Some problems like poor health services and low income have been recognized in most of the studies but they still exist, regardless of different policies we have. This means that policies are not reflect the local condition. In order to have changes there is a need of using this research.

6.3.2 Area for further studies

The study was conducted in Njombe district through it can be generalized to the whole country, but it is suggested to extent the study to another part of the country because different localities have different characteristic.

Based on findings in this study and method applied I recommend the future research to undertake a similar study in qualitative nature in order to capture more suggestion from community members because some variable can be explained best from qualitative nature. Detailed explanation of the factors is needed in order to generate more relevant policy implications. Also other variable which have not been included in the study but are assumed to have influence of health insurance on health care utilization should also be included in other study.

The study provides vital insight on influence of health insurance on health care utilization. Further studies are needed with higher number of interviewee and different stakeholders like service provider so as to capture a lot of ideas from people on how health care utilization can be raised.

6.4 Research limitation

The study used sample size from four wards in Mtwango including Itunduma, Kichiwa and Ibumila in Njombe district, in Tanzania. Therefore the findings of the study might be best for rural settings. Future studies can use samples from other regions or urban and other context of the formal sector.

The sample size was limited to 138 respondents and this might be contributed to inconsistence of some results. Therefore future studies should consider taking the large sample size as much as possible for better representation of the population. The small size could lead to underrepresentation of population and limit generalization of the study and thus reduce its validity.

There is ambiguity of some information in this study like monthly average income was a challenge because most of them are farmers and their income are seasonal which ranging to three months up to six months. Therefore most of them their information might be inaccurate because they only just do estimation. Therefore future study should generate alternative indicators for measures of the variables of that kind.

Lastly some information provided by respondents might be inaccurate this is because other respondents do not keep their record.

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APPENDICES

APPENDIX I

Questionnaire on the analysis of health insurance and its effects on healthcare utilization in Njombe district

Questionnaire number.....

Date.....

Name of interviewer.....

Location / village.....

Telephone number.....

Dear Sir /Madam

I would like to thank you for participating in this study. I am investigating on "Analysis of health insurance and its effects on healthcare utilization in Njombe district-Tanzania. The findings of this study are for academic purposes but will help in implementation of the scheme. I will share the findings when complete to help improve the scheme in district and all information provided here will be treated confidentially.

A. Household characteristics

A1. What is your age……..

A2.Sex

Male [ ] Female [ ]

A3.Marital status

Married [ ] Single [ ] Widow [ ] Divorced [ ]

A4. How many years of formal education did you attain…….

A5.How many people are in your household? .....People.

A6. How many children do you have? …….. Children

A7. What is your average monthly income? .....

A8.What is your source of income?

What are your source of income	**Source of income**	**Estimate amount(TZS)**
	Farming activities	
	Worker wages	
	Profit from business	
	Government income, such as pension	
	Remittances from relatives	
	Income from interest or rental property	
	Other cash income (Specify)……	
	Total monthly income(TZS)	

A9.What kind of economic activity do you depend on?

Agriculture [ ] Trade [ ] Employment [ ] Livestock keeper

[ ] , Others (Specify)……..

A10.Which one do you depend on mostly?

Farmer [ ] Trade [ ] Employment [ ] Livestock keeper

[ ] Others …… (Specify)……

B. Adoption of health insurance

B1. Are you aware of health insurance?

Yes [ ] No [ ]

B2. Are you a member of Health insurance?

Yes [ ] No [ ]

B3. If yes give the names…….……

……..

B4.What are the benefits or reasons for joining? .....

……..

……..

B5.How much do you contribute per month……..

B6. Are you able to afford the insurance premium per month?

Yes [ ] No [ ]

B7.If no give the reasons ……..……

……

B8. How does the premium attracting you?

To a very great extent [ ] Normal [ ] to great extent [ ]

To low extent [ ] not attractive at all [ ]

B9. Do you know the benefit of coverage of health insurance?

Yes [ ] No [ ]

B10. Is there any education about the scheme?

Yes [ ] No [ ]

B11. What are the sources of health insurance education?

Health insurance Funds Organization [ ] village Council [ ] NGOs [ ]

Others (specify)……

B12. Are you utilizing health care services by using health insurance?

Yes [ ] No [ ]

B13.How many times do you visit health facilities per month?

Two times per months [ ] Three times to four per months [ ] Five and above [ ]

B14. How far is your health facilities located?

1) 0-5 km [ ] 2) 6- 10 km [ ] 3) 10 an d above km [ ]

B15.For your opinion , what do you think should be done to improve health insurance scheme?

.....

.....

.....

Thank you for participation and have a nice day.

APPENDIX II

Results for Probit model Model: Dependent variable: Adoption of health insurance

```
. probit Adoption LnAge EducationD4  EducationD2 EducationD1 LnHouseholdD LnHouseholdS LNincome P
> remiumF Sex

Iteration 0:   log likelihood = -94.199919
Iteration 1:   log likelihood = -12.355171
Iteration 2:   log likelihood = -10.380579
Iteration 3:   log likelihood = -10.088978
Iteration 4:   log likelihood = -10.085331
Iteration 5:   log likelihood = -10.085323
Iteration 6:   log likelihood = -10.085323

Probit regression                                 Number of obs   =        138
                                                  LR chi2(9)      =     168.23
                                                  Prob > chi2     =     0.0000
Log likelihood = -10.085323                       Pseudo R2       =     0.8929
```

Adoption	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
LnAge	3.296825	1.412651	2.33	0.020	.5280803	6.065569
EducationD4	2.93854	1.099315	2.67	0.008	.7839223	5.093157
EducationD2	-.6905932	1.73631	-0.40	0.691	-4.093699	2.712513
EducationD1	-1.958332	1.201546	-1.63	0.103	-4.313318	.3966541
LnHouseholdD	1.559163	.8689559	1.79	0.073	-.1439594	3.262285
LnHouseholdS	1.327094	.651534	2.04	0.042	.0501104	2.604077
LNincome	.4450824	.2751008	1.62	0.106	-.0941054	.9842701
PremiumF	-1.852013	1.064499	-1.74	0.082	-3.938393	.2343663
Sex	-.5569441	.8867168	-0.63	0.530	-2.294877	1.180989
_cons	-16.04759	5.978052	-2.68	0.007	-27.76435	-4.330819

APPENDIX III

Marginal effect of the Probit regression model output of Adoption.

Marginal effects after probit

y = Pr(Adoption) (predict)

= .71905051

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.]		X
LnAge	1.111608	.49961	2.22	0.026	.132396	2.09082	3.62878
Educat~4*	.5463839	.20093	2.72	0.007	.152572	.940196	.23913
Educat~2*	-.2598064	.68497	-0.38	0.704	-1.60232	1.08271	.072464
Educat~1*	-.6723311	.30179	-2.23	0.026	-1.26382	-.080842	.217391
LnHous~D	.5257113	.31081	1.69	0.091	-.083458	1.13488	.596417
LnHous~S	.4474633	.19799	2.26	0.024	.059407	.835519	.95875
LNincome	.1500708	.1065	1.41	0.159	-.058665	.358806	11.4847
PremiumF	-.6244533	.44679	-1.40	0.162	-1.50015	.251243	1.39855
Sex*	-.1853342	.28849	-0.64	0.521	-.750762	.380093	.514493

(*) dy/dx is for discrete change of dummy variable from 0 to 1

APPENDIX IV

Results for Ordered probit results: Dependent variable: Health care utilization (Number of visits)

```
. oprobit Healthcare lnAge Sex iformaleduc Primaryeduc Secondaryeduc Diplomaeduc Married lnHhsize lnIncome lnDistanceA Healthin
> surance PremiumF, robust

Iteration 0:   log pseudolikelihood = -153.77596
Iteration 1:   log pseudolikelihood = -126.54194
Iteration 2:   log pseudolikelihood = -126.15441
Iteration 3:   log pseudolikelihood = -126.15317
Iteration 4:   log pseudolikelihood = -126.15317

Ordered probit regression                       Number of obs   =        138
                                                Wald chi2(12)   =      66.19
                                                Prob > chi2     =     0.0000
Log pseudolikelihood = -126.15317               Pseudo R2       =     0.1796
```

Healthcare	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
lnAge	-.5005942	.4823852	-1.04	0.299	-1.446052	.4448634
Sex	.1664475	.2537331	0.66	0.512	-.3308602	.6637551
iformaleduc	.1075257	.4154622	0.26	0.796	-.7067653	.9218168
Primaryeduc	.2736261	.4355967	0.63	0.530	-.5801279	1.12738
Secondaryeduc	.478193	.4578406	1.04	0.296	-.4191581	1.375544
Diplomaeduc	-.4788846	.3414476	-1.40	0.161	-1.14811	.1903405
Married	1.033377	.5665593	1.82	0.068	-.0770587	2.143813
lnHhsize	-.0704881	.1896527	-0.37	0.710	-.4422005	.3012243
lnIncome	-.2487631	.097994	-2.54	0.011	-.4408279	-.0566983
lnDistanceA	-.5712965	.1946916	-2.93	0.003	-.9528851	-.189708
Healthinsurance	.549389	.2380548	2.31	0.021	.0828102	1.015968
PremiumF	.1239873	.209701	0.59	0.554	-.2870191	.5349938
/cut1	-6.034032	2.228854			-10.40251	-1.665559
/cut2	-3.890231	2.202108			-8.206284	.4258227
/cut3	-3.504061	2.211337			-7.838201	.8300795

APPENDIX V

Marginal effect of ordered probit model 1

```
. mfx, predict (outcome (1))

Marginal effects after oprobit
      y  = Pr(Healthcare==1) (predict, outcome (1))
         = .69161413
```

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.]		X
lnAge	.0752445	.07495	1.00	0.315	-.071659	.222148	3.62878
Sex*	-.0247912	.0381	-0.65	0.515	-.099457	.049874	.514493
iforma~c*	-.0175582	.0731	-0.24	0.810	-.160831	.125715	.217391
Primar~c*	-.049836	.09239	-0.54	0.590	-.230923	.131251	.217391
Second~c*	-.1094087	.13701	-0.80	0.425	-.377938	.159121	.072464
Diplom~c*	.0457102	.02411	1.90	0.058	-.001549	.092969	.253623
Married*	-.111299	.05639	-1.97	0.048	-.221815	-.000783	.572464
lnHhsize	.0105951	.02849	0.37	0.710	-.045251	.066441	.95875
lnIncome	.0373917	.01975	1.89	0.058	-.001317	.0761	11.4847
lnDist~A	.0858718	.03904	2.20	0.028	.009349	.162394	1.70619
Healt~ce*	-.0683855	.04018	-1.70	0.089	-.147133	.010361	.594203
PremiumF*	-.0178347	.03044	-0.59	0.558	-.077499	.04183	.615942

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Marginal effect of ordered probit model II

```
. mfx, predict (outcome (2))

Marginal effects after oprobit
      y  = Pr(Healthcare==2) (predict, outcome (2))
         =   .0987273
```

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.]		X
lnAge	-.0460117	.04597	-1.00	0.317	-.136109	.044085	3.62878
Sex*	.0152667	.02406	0.63	0.526	-.031882	.062415	.514493
iforma~c*	.0098243	.03752	0.26	0.793	-.063706	.083355	.217391
Primar~c*	.0245653	.03774	0.65	0.515	-.049402	.098533	.217391
Second~c*	.0398509	.03453	1.15	0.249	-.027832	.107534	.072464
Diplom~c*	-.0432904	.03139	-1.38	0.168	-.104823	.018243	.253623
Married*	.0873875	.04847	1.80	0.071	-.007612	.182387	.572464
lnHhsize	-.0064788	.01729	-0.37	0.708	-.040375	.027417	.95875
lnIncome	-.0228648	.01117	-2.05	0.041	-.04476	-.00097	11.4847
lnDist~A	-.0525102	.02063	-2.55	0.011	-.092935	-.012085	1.70619
Healt~ce*	.0494367	.02602	1.90	0.057	-.001568	.100441	.594203
PremiumF*	.0113999	.01943	0.59	0.557	-.026681	.049481	.615942

```
(*) dy/dx is for discrete change of dummy variable from 0 to 1

.
```

Marginal effect of ordered probit model III

```
. mfx, predict (outcome (3))

Marginal effects after oprobit
      y  = Pr(Healthcare==3) (predict, outcome (3))
         =  .12803984
```

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.]		X
lnAge	-.1047884	.10141	-1.03	0.301	-.303554	.093977	3.62878
Sex*	.0347585	.05229	0.66	0.506	-.067729	.137246	.514493
iforma~c*	.0232902	.09333	0.25	0.803	-.159624	.206205	.217391
Primar~c*	.0623716	.10822	0.58	0.564	-.149733	.274476	.217391
Second~c*	.1234884	.14003	0.88	0.378	-.150957	.397934	.072464
Diplom~c*	-.0875308	.05398	-1.62	0.105	-.193337	.018275	.253623
Married*	.2018136	.10462	1.93	0.054	-.003238	.406865	.572464
lnHhsize	-.0147551	.03982	-0.37	0.711	-.092797	.063287	.95875
lnIncome	-.0520731	.02162	-2.41	0.016	-.09444	-.009707	11.4847
lnDist~A	-.1195884	.04669	-2.56	0.010	-.211091	-.028086	1.70619
Healt~ce*	.1088335	.04885	2.23	0.026	.013094	.204573	.594203
PremiumF*	.0255364	.04326	0.59	0.555	-.05926	.110333	.615942

(*) dy/dx is for discrete change of dummy variable from 0 to 1

APPENDIX V1

Test for matrix correlation

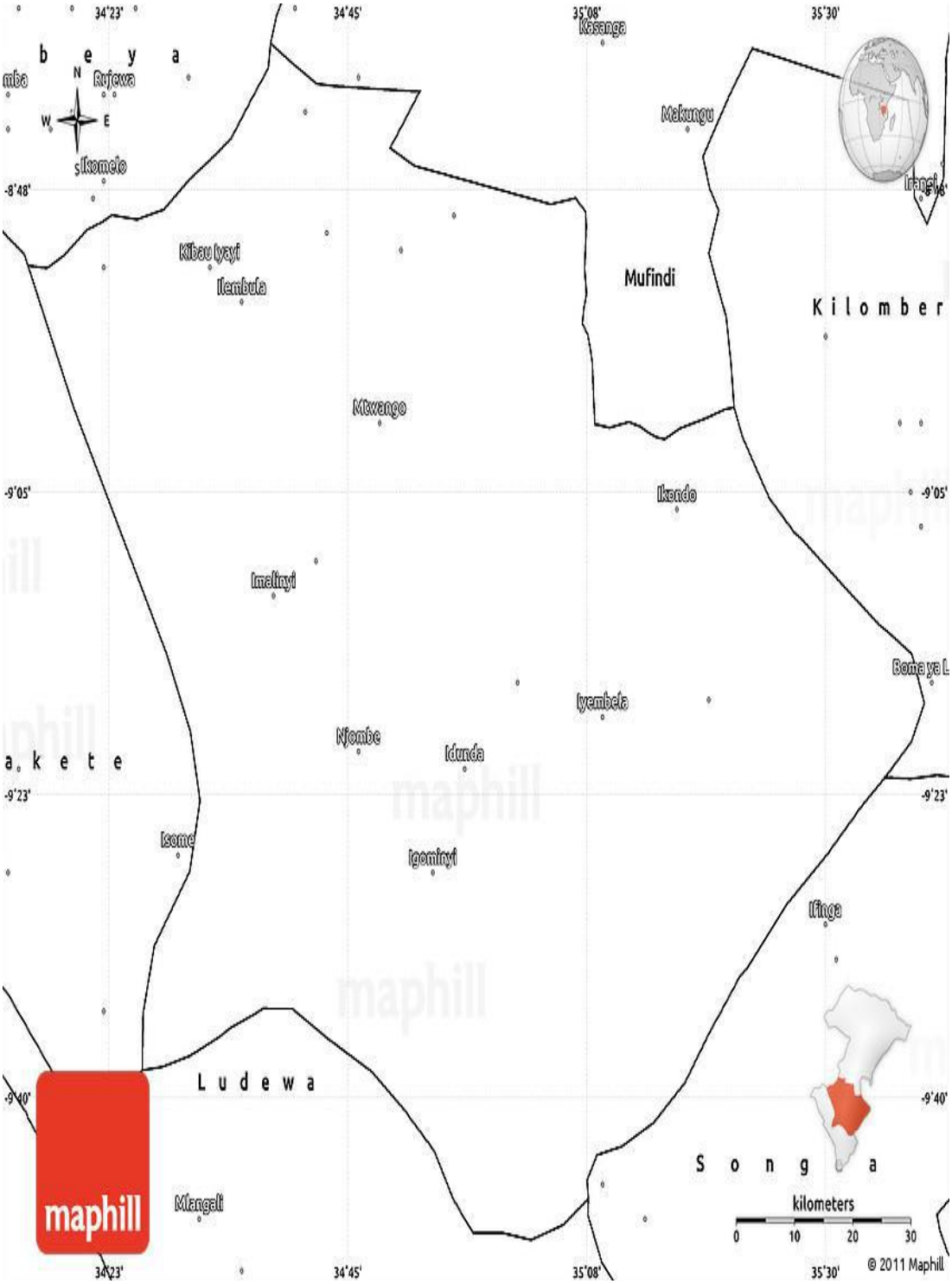
```
. corr Healthcare lnAge Sex iformaleduc Primaryeduc Secondaryeduc Diplomaeduc Married lnHhsize lnIncome lnDistanceA Healthinsur
> ance PremiumF
(obs=138)
```

	Healt~re	lnAge	Sex	iforma~c	Primar~c	Second~c	Diplom~c	Married	lnHhsize	lnIncome	lnDist~A	Healt~ce
Healthcare	1.0000											
lnAge	0.2741	1.0000										
Sex	-0.0410	-0.5367	1.0000									
iformaleduc	-0.2293	-0.4778	0.2308	1.0000								
Primaryeduc	-0.2293	-0.5032	0.3011	-0.2778	1.0000							
Secondarye~c	0.1620	0.2398	-0.1759	-0.1473	-0.1473	1.0000						
Diplomaeduc	0.0669	0.5295	-0.3002	-0.3072	-0.3072	-0.1629	1.0000					
Married	0.4538	0.8300	-0.4292	-0.5388	-0.5744	0.1851	0.5038	1.0000				
lnHhsize	0.1743	0.7570	-0.4446	-0.3800	-0.3957	0.2609	0.4774	0.6610	1.0000			
lnIncome	0.1157	0.5699	-0.4050	-0.4186	-0.2557	0.2374	0.4124	0.5514	0.4624	1.0000		
lnDistanceA	-0.4623	-0.7534	0.4273	0.4896	0.4989	-0.2076	-0.4884	-0.8705	-0.6103	-0.5857	1.0000	
Healthinsu~e	0.3946	0.3223	-0.0646	-0.2084	-0.2084	0.1171	0.1765	0.4193	0.1785	0.3290	-0.3533	1.0000
PremiumF	0.2413	0.1597	0.0378	-0.1256	-0.1618	0.1632	-0.0191	0.2512	0.0742	0.1049	-0.1808	0.1667

	PremiumF
PremiumF	1.0000

APPENDIX VI

A map of Njombe District



CURRICULUM VITAE

1:0 Personal Particulars

First name	Dorice
Last name	Ngeniuko
Sex	Female
Date of birth	06/8/1990
Place of birth	Njombe
Address	Po.Box 577 Njombe
Phone number 0752049726	
E-mail	doryngeniuko61@gmail.com
Tribal	Bena
Marital status	Single
Nationality	Tanzanian

2:0 Education Background

Year	Level attained	Rewards	Name of School
2013-2016	University Education	Bachelor Degree in Community Development with Bias in Management of Community Development Programmes	Tengeru Institute of Community Development(TICD)
2011-2013	Diploma Education	Diploma in community Development	Rungemba Community Development Training
2009-2011	Advanced Level Education	Advanced Certificate of Secondary Education	Kidugala Lutheran Seminary
2005-2008	Ordinary Level Education	Ordinary Certificate of Secondary Education	Kidugala Lutheran Seminary
1998-2004	Primary Education	Certificate of Primary Education	Mdete Primary School

3:0 Personal Skills

Skills	
❖ Community Development skills	❖ Managerial skills
❖ Development study skills	❖ Ability to work independently
❖ Entrepreneurship skills	❖ Fast learner and team player
❖ Project Planning and management skills	
❖ Interpersonal business skills	❖ Strong in introduction of new ideas

4:0 Work Experiences

- Njombe Town council {October,2012-January 2013 as a Field work}
- Njombe Town council Under Community Development Department from June to September (2015).

I was assigned to work as an assistant Community Development officer in Community development department; my responsibilities were to, Prepare community development plans ,Participate in community and social development activities , Identifying community skills, assets, issues and needs, Developing new resources in dialogue with the community and evaluating existing programs , Building links with other groups and agencies , Helping to raise public awareness on issues relevant to the community, Participate in Corporate Social Responsibility, Leasing with interested groups and individuals to set up new services, Undertaking general administrative duties and Perform any other duties as may be assigned by superiors.

5.0 ***Awards/Achievements***

2011-2013 Certificate of participation in Project Design, Implementation, and Entrepreneurship (Think beyond Employment) Club awarded at Rungemba Collage .Iringa

7:0 Computers Literary

- Computer basics
- Microsoft Word
- Microsoft Excel
- E-Mail access

8:0 Languages

❖ English	Fluent both {speaking and writing}
❖ Kiswahili	Fluent both {speaking and writing}

9:0 Personal Interest and Activities

- ❖ Developing my particular carrier
- ❖ Voluntarily outreach program
- ❖ Exchanging ideas with my colleagues
- ❖ Visiting the needy i.e. orphans and street children
- ❖ Watching TV and listening Music
- ❖ Participating in game and sports like Playing Netball

10:0Referees

Name	**Address**	**Relationship**	**Position**	**Place of wok**
Ms Santina Mbata	P.o.Box 6 Mafinga Mobile Phone,0787389227, 0763365725 E-Mail;smbatta@yahoo.com	Principal	Principal	Rungemba (CDTI)
Mr Odo Msemwa	P.o.box 577,Njombe Mobile phone,0767467153	Field Supervisor	Community Development Officer	Njombe Town Council.
Mr .Nkini	P.o.Box 6, Mafinga, Mobile phone,0767908039	Research supervisor	Lecturer	Rungemba Community Development Training Institute.