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HEALTH FINANCING IN GHANA: THE ROLE OF MICROFINANCE INSTITUTIONS IN REDUCING HEALTH RISKS

BY

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DECLARATION

I, Theresa Enyonam Adzo Doke, hereby declare that this thesis titled "Health Financing in Ghana: The role of Microfinance Institutions in reducing health risks" is the result of independent work carried out under the supervision of Professor Felix Ankamah Asante and Dr. Ama Pokuaa Fenny, at the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana. No part of this work has ever been presented either in part or whole to any other academic institution for the award of a degree or to a journal for publication. All refences cited have been duly acknowledged.

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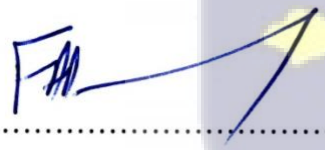

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To my husband, Dr. Boye Mensah Kwao Koney and children, Naa Adjeley Aseye Koney and Boye-Mensah Nutikorkoe Koney, for the endless sacrifices they made on this journey.

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ABSTRACT

The focus of the Sustainable Development Goal 3 (SDG 3) is to ensure healthy lives and wellbeing of all people. This global call for Universal Health Coverage (UHC) is anchored in the ability to provide a health financing system that is efficient, effective and equitable. Ghana, like several other countries recognizing the gap in access to healthcare, instituted the National Health Insurance Scheme (NHIS) as a way to mitigate the negative impact of out-of-pocket payments. However, cost of services and premium continue to pose challenges to enrolment and retention on the NHIS. Unlike Microfinance, health insurance has not found innovative ways of substantially bringing down the cost of services to levels that the poor can afford. Though the ability of Microfinance Institutions (MFIs) to reach people in the informal sector is not in doubt, questions have been raised about the efficiency of Microfinance institutions and its relationship with their ability to reach the poorer segments of the population.

Using a mixed methods approach, the study sought to examine the role of MFIs in Ghana's health financing structure, conduct a cost-efficiency analysis of microfinance institutions in their current operations and also examine the factors that influence the participation of households in paying for health insurance through MFIs.

The study found that some MFIs, recognizing of the effects of poor health on the economic performance of their clients, have found innovative ways of offering health related savings and loans products. These products are however provided on the blind side of the regulator. Significant inefficiencies were identified in the MFI sector with an average cost efficiency of 50%, and with, wide variations observed between the least efficient (Central) and the most efficient (Eastern) regions. The average loan per savings indicated that MFIs lend about two times a client's savings. This indicates that though MFIs are striving for efficiency, they still

concentrate on serving poorer clients. The average WTP is GH₵40.00. It is relatively higher in the urban districts (La-Dadekotopon- GH₵45; Tamale Metro- GH₵40) as compared to the rural districts (Shai-Osudoku- GH₵35; West Mamprusi- GH₵27.5). Subjective norms, ethnicity, age, household size, source of treatment, last episode of illness in the household and wealth are the significant determinants of willingness to pay for health insurance through MFIs.

The study recommends that to use Microfinance institutions as a platform to reach the informal sector, there is the need for a strong policy and regulatory framework. Also, Bank of Ghana must intensify its regulation and monitoring of the Microfinance sector in order to streamline their activities. MFIs themselves must strive to improve their efficiency by managing their asset base well and maintaining portfolio quality in order to reduce inefficiency which will lead to their sustainability. Premiums must be actuarially determined with the characteristics of the segments of the population in mind to ensure that people pay premiums that resonate with their economic status.

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ACCION	Americans For Community Co-operation In Other Nations
AS	Asset size
ATM	Automated Teller Machine
ALB	Average Loan Balance
ABORROWERS	Number of Active Borrowers
CHPS	Community-based Health Planning Services
CGAP	Consultative Group to Asist the Poorest
CPB	Cost Per Borrower
CSO	Civil Society Organization
DEA	Data Envelopment Analysis
EUT	Expected Utility Theory
ERP	Economic Recovery Programme
GAMC	Ghana Association of Microfinance Companies
GDP	Gross Domestic Product
GHS	Ghana Health Service
GIFMIS	Government Integrated Financial Management Information System
GSS	Ghana Statistical Service
GOG	Government of Ghana
GLP	Gross Loan Portfolio
HF	Health Financing
HI	Health Insurance
HIV	Human Immunodeficiency Virus
IGF	Internally Generated Funds
ILO	International Labour Organisation

IMF	International Monetary Fund
JICA	Japan International Co-operation Agency
LaDMA	La-Dadekotopon Metropolitan Assembly
LMICs	Low and Middle-Income Countries
MDG's	Millennium Development Goals
MOH	Ministry of Health
NHIA	National Health Insurance Authority
NHIS	National Health Insurance Scheme
NHS	National Health Service
NGO	Non-governmental Organization
OXFAM	Oxford Committee for Famine Relief
PAR	Portfolio at risk
POS	Point of Sale
SDG	Sustainable Development Goals
SEWA	Self Employed Women's Association
SFA	Stochastic Frontier Approach
SHI	Social Health Insurance
SAVINGS	Savings Portfolio
TC	Total Cost
TPB	Theory of Planned Behavior
UHC	Universal Health Coverage
USAID	United States Agency for International Development
WTP	Willingness to Pay
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background

The world over, the health status of people has improved tremendously because of improvements in the provision of healthcare since the 1950's (Allen, 2019). This increase has been facilitated especially by globalization, promoting the circulation of health technologies all over the world (Dilger & Mattes, 2018). All the major indicators to measure global health such as life expectancy, maternal mortality and child mortality have seen major improvements (WHO, 2020). The World Health Statistics (2020) and Population Reference Bureau (2021) report that, globally life expectancy, has increased from 66.5 years in 2000 to 73 years in 2018, while out of the twenty-nine health related indicators reported under the SDG, twenty-four have seen improvements (PRB, 2021 and WHO, 2020). However, Low and Middle-Income countries (LMICs) continue to lag behind in adequately providing for the health care needs of their citizens, and large disparities in overall health outcomes continue to be observed between developed and developing countries (WHO, 2020).

Consequently, health care provision remains a core developmental issue on the agenda of many international development institutions like the World Health Organization, United Nations, World Bank, the Commonwealth among others (Kumar, 2013). International initiatives such as the Millennium Development Goals (MDG's) had three of its targets focusing on health care whiles its succeeding Sustainable Development Goals (SDGS) is designed to consolidate the health-related gains that were made under the MDGs with universal health coverage as a main target (Kumar et al., 2016). Health financing is identified as a very important if not the most important component in meeting all health-related goals (WHO, 2005). This realization, coupled with the dominance of user charges and the

widespread nature of voluntary community health insurance schemes from the 1970's and 80's moved health financing up on the agenda of health policy discourse once again (McIntyre, 2007). The "Sustainable health financing, universal coverage and social health insurance'' resolution passed in May, 2005 by WHO member states and the Abuja Declaration are just a few of the many interventions, that have been proposed to encourage member states to put in place health financing systems that will ensure that their citizens have and can afford the best health care without pushing themselves into financial difficulties (WHO, 2010). These initiatives among others have increased the number of resources going into the financing of health care. Globally, about US$8.3 trillion was spent on health in 2018 (Vrijburg & Hernandez-Pena, 2020) and this is projected to increase to US$20 trillion by 2040 (Dieleman et al., 2018).

The different sources of finance, that is, public, private, aid, all provide a complex financing space, which has several implications on "who pays for what, who gets served and what kind of service is enjoyed'' (McIntyre, 2007). No single path of financing has been found to be the magic bullet because the different historical, social, cultural and economic context of countries affects the outcome of the various financing strategies (Gottret & Scheiber, 2006). Though much of the issues that have been raised on health systems can be traced to health system financing, most developed countries have managed to finance the health care needs of their populations through Social Health Insurance (Thompson, Foubister & Mossialos, 2009). The challenge that still remains for them is how to control health care cost (Thompson et al., 2009 and Pencheon, 2013). Developing countries on the other hand, are still battling with how to provide basic healthcare services for all citizens and at the same time control high health care expenditure (Saleh, 2013). This makes the ability to collect enough revenue and financial sustainability issues very prominent among the challenges developing countries face in providing health care (WHO, 2010).

The disease burden of Africa continues to be higher than that of other regions of the world (Gouda et al., 2019) and yet, Africa, contributes only 1% of health spending globally (Vrijburg & Hernandez-Pena, 2020). The share of GDP expenditure on health in Low- and Middle-Income Countries (LMICs) in 2018 was 5.41% (WHO, 2020) on average with most countries not achieving the Abuja Target of 15% (Burke & Sridhar, 2013). Government share in total health expenditure continues to dominate in most developing countries with the private sector not playing much of a big role in financing health. On average, about 33.15% of the expenditure on health comes from the governments in LMICs (WHO, 2020).

Out of pocket expenditure at the point of service on average, accounts for about 36.65% of the household expenditure on health in LMICs (WHO, 2020). This shows that out-of-pocket expenditure remains high with the tendency to push poor households into future impoverishment through catastrophic payments. The inability of most of the poor to pay out of pocket at the point of service, puts the focus back on community and social health insurance schemes, as a good health financing strategy, to counter the negative effects of out-of-pocket payments and to improve health care access and outcome for all (Spaan et al., 2012; Lagomarsino et al., 2012). Social Health Insurance and Community Health Insurance schemes are prepayment mechanisms that provide a more equitable access to health care and financial risk protection than other mechanisms like private health insurance (Mathauer et al., 2008 as cited in Fenny et al., 2018). However, success with social health insurance schemes in developing countries has been mixed (Han, 2012).

Ghana like other countries in the Sub-Saharan region has gone through several health financing policies and mechanisms. Health care was free from independence, then to the payment of some fees from the 1970's. These fees were negligible in comparison to the cash and carry system introduced in the late 1990's. The Government of Ghana in 2003 finally

settled on social health insurance as the surest way to achieve universal health care for all its citizens (Adisah-Attah, 2017; Addae-Korankye, 2013; Adamba, 2011). The health sector is financed mainly through government budgetary allocations, taxes, deductions from the Social Security and National Insurance Trust (SSNIT) contribution of formal sector workers and donor funds (Adisah-Atta, 2017). While several challenges have been identified with the health system in Ghana, inadequate financing remains the most consistent challenge facing the country (Adisah-Atta, 2017). Low household incomes and inadequate resource mobilization capacity accounts for some of these challenges (Adisah-Atta, 2017). Though the government remains the main financier, dedicating about 7% of total government spending to health in 2017, it is still below the Abuja target of 15% (WHO, 2018). This coupled with the decline in donor funding means that resources in the health sector are dwindling, threatening the sustainability of the NHIS (Adisah-Atta, 2017).

Though Ghana has been touted as a success story when it comes to social health insurance in Africa, universal coverage has still not been achieved and the increasing population is likely to worsen the already fragile health system (Christmals & Aidam, 2020; Zhang et al., 2019: Van der Wielen, 2018). The Ghana Statistical Service (2013) estimates that Ghana's population will reach 33.4 million by 2025 from its 2010 figure of 24.2 million. This increase in population and change in population structure has implications for the epidemiological transition of the country. The proportion of persons below 15 years constitute forty percent of the population whiles those in the 15 to 59 years group constitute over fifty percent of the population with the aged constituting about 8% of the total population (GSS, 2012). The percentage of the aged is expected to increase from 6.1% in 2010 to 8.6% by 2030 (Kpessah-Whyte, 2018). The disease burden is expected to shift with non-communicable diseases accounting for 43% of all deaths in Ghana (WHO, 2020; Ghana NCD Alliance, 2019). Due to the fact that non-communicable diseases are more expensive to treat, the current financing

mechanisms will be put under pressure to increase resource mobilization in order to meet the health demands of a larger and older population (WHO, 2020; Van der Wielen, 2018; Adisah-Atta, 2017). The challenges associated with health financing in Ghana means that a large majority of the poor and the informal sector for that matter, still do not have access to appropriate health care when they need it (Fenny, Yates & Thompson, 2018; Kotoh & Van der Geest, 2016). For instance, Alhassan, Nketiah-Amponsah and Arhinful (2016) and Andoh-Adjei et al (2018) have reported poor quality of services and cost sharing as some of the challenges that have arisen as a result of the untimely release of funds to health care providers under NHIS, contributing to the financial challenges people face in accessing health care.

One of the notable challenges facing the NHIS in its ability to manage its resources is cost escalation as a result of both demand and supply side moral hazard (Andoh-Adjei et al, 2019). At its inception, the NHIS reimbursed accredited facilities through the fees-for-service payment system. This led to an escalation of claims expenditure which led to the initiation of provider payment reforms in 2008 and the adoption of the Ghana Diagnostic-Related Groupings (G-DRG) (Andoh-Adjei et al, 2019). The G-DRG notwithstanding, out-patient utilization and claims continued to increase (NHIA, 2013). The NHIA after careful consideration decided to include capitation as the payment mode for outpatient services. Capitation was introduced to slow down escalating claims expenditure (NHIA, 2013)

The solution to increasing health financing seems to lie in either increasing the investment in the health sector by cutting resources to other sectors like education, water among others or increasing taxes or health care user fees (Adisah-Atta, 2017; Deaton & Tortora, 2015). These solutions may however, be unpopular, and so recent debates have encouraged health policy analysts to go beyond the user-fee subsidized-premium debates to look for more innovative

ways of mobilizing resources in order to provide quality health for all (MOH, 2015). Mobile money adoption and microfinance schemes are some of the avenues advocates claim can help to reach and include excluded populations (Leatherman et al., 2012). Microfinance seems to be a good option in Sub-Saharan Africa, especially, where the informal sector is concerned (Aron, 2015).

This is because unlike Microfinance, health insurance has not found innovative ways of substantially bringing down the cost of services to levels that the poor can afford. Microfinance Institutions have traditionally assisted the economically active poor by providing financial-services, primarily credit, to help their income generating activities (Reinsch, Dunford & Metcalf, 2011). Micro-loans have supported millions of poor households in pursuing opportunities that would have otherwise been out of their reach (Churchill & McCord, 2012). According to Reed (2015), MFIs reach as many as 204 million clients worldwide. The vast social network MFIs have, their expertise in providing small loans and savings as well as their mission to ensure the financial sustainability of households puts them in a good position to facilitate health financing (Leatherman et al., 2012). This may help remove some of the challenges in seeking treatment and help to reduce the health shocks that jeopardize the already fragile economic status of poor people (Leatherman et al., 2012). Some MFIs have seen the need to respond to the effect of ill-health on the performance of their clients by providing health interventions such as health education, localized micro health insurance schemes with their services, without going out of their business and professional scope (Reinsch et al, 2011).

Leatherman and Metcalfe (2012) found that where MFIs provided micro health insurance packages, it led to an increase in the use of health services. Notable examples of MFIs that have successfully provided financial products for health to their clients include Bank Rakyat

Indonesia, Self Employed Women's Association (SEWA), and GRAMEEN (Banerjee, Duflo & Hornbeck; 2014; Meghan, 2010). Due to economies of scale and increased outreach, MFI interventions tend to be cost effective (Lorenzetti et al., 2017). Reinsch et al (2011) in analyzing the cost benefits of five MFIs offering integrated programmes like microfinance and health insurance in 2009 found that, the average marginal cost was only US$0.29 per client and the average total net cost was only US$1.59 per annum per client served. This low cost was attributed to the already existing vast distributional reach of MFIs. A health financing system where people can borrow and save for health insurance, therefore, may lead to an increase in enrollment and revenue for the health sector and may present a more sustainable source of income. This is especially true in Ghana's case where everyone is mandated to sign on to the NHIS but only about 3% of the resources for the NHIS comes from the payment of premium (Wang et al., 2017).

1.2 Problem Statement

Ghana, like several other developing countries is challenged with how to effectively provide the right health financing option to its citizens. Efforts have been made since independence to finance and provide quality health care to citizens through the promulgation of several policies and acts. In 1971, the Hospital Fees Act was instituted but the fees were so low that it was negligible (MOH, 2015). During the period of economic recovery, the Hospital fees regulation was passed in 1985 which led to full cost recovery in 1992, popularly known as the cash and carry system (MOH, 2015). The social challenges associated with the cash and carry system led to the adoption of a social health insurance scheme.

The National Health Insurance Scheme was implemented in 2003, the main goal of which was to remove the financial challenges that people faced in accessing healthcare in Ghana (NHIA, 2003). Exempt categories were created under the scheme in order to identify

vulnerable groups and free them from paying premium. Subsequently, a free maternal health policy was implemented under the NHIS in 2008, to allow pregnant women to be covered under the scheme through pregnancy, delivery and three months post-partum (Twum et al, 2018). Aryeetey et al (2016) and Alhassan, Nketia-Amponsah and Arhinful (2016) report an increase in outpatient and in-patient services as a result of the NHIS. Dzakpasu et al (2012) also reported an increase in skilled attendance at birth in the Brong Ahafo region as a result of the free maternal care under NHIS. Indicating an increase in the use of biomedical services as a result of the NHIS.

Notwithstanding all these efforts to improve health care by increasing access, coverage and improve the targeting of vulnerable groups, only about 38% of Ghanaians were enrolled on the NHIS in 2014, even though, about 80% of the Ghanaian population has ever enrolled on the scheme (Andoh-Adjei et al, 2018; Wang et al, 2017). Though the use of mainly tax funds under the NHIS ensures that health financing keeps up with economic growth, the revenue does not increase as coverage increases (Wang et al, 2017). Also, the scheme does not bring in enough resources through premiums, threatening the sustainability of the scheme (MOH, 2015). About 38.89% of all health spending in 2018 was from public sources with the private sector and out of pocket making up the rest (WHO, 2020).

Financing of health in Ghana has seen a steady increase over the last few years though not in absolute terms indicating that as a percentage of GDP, health spending is losing out. Health expenditure as a share of GDP in 2014 was 3.6% and increased to 5.9% in 2015 whiles health expenditure as a share of general government expenditure was 7.1% (World Bank, 2017; World Bank, 2018). Though Ghana is doing fairly well when compared to other countries in the sub-region, the Abuja target of 15% has still not been achieved (MOH, 2015). The private sector does not hold much promise since much of the revenue from the sector remains out of

pocket with only 10% of the revenue in that sector coming from household premiums (MOH, 2015).

As a result of Ghana's status as a lower middle-income country, changing financing structure and new actors on the health financing scene, donor funds have greatly reduced making the NHIS the main financier of public health care even though it is highly subsidized (MOH, 2015). Premiums paid by households, which is supposed to form a substantial percentage of the fund, is low. Workers from the informal sector, make up about 93% of the active labor force in Ghana (GSS, 2012), but only form about 29% of NHIS membership. Out of the 34% of the population on NHIS, only about 10% pay contributions to the scheme with more than 60% under exemption (Alhassan et al, 2016; Burke & Sridhar, 2013). Though the premiums for this sector are low ranging between GHS 7.2 to GHS 48, the fees people pay as premium to get their NHIS cards only covers about 5% of the cost of NHIS services (Kotoh, Aryeetey & Geest, 2018).

Also, though the NHIS is highly subsidized, some poor people abandon their membership because of the inability to make the annual lump sum premium payments (Kotoh et al, 2018; Fenny et al., 2016; Kusi et al., 2015; Amporfu, 2013). As a result, the NHIS only covers about 2% of the Ghanaian population considered poor (Fenny, Yates & Thompson, 2018). This shows that the larger section of those considered poor are paying out of pocket for health care. This leads to a culture where people just refuse to patronise formal health care services, to free them from both the direct and indirect cost of using such services (Meghan, 2010).

Out of pocket payment stood at 37.69% of total health expenditure in 2018 despite the NHIS (World Bank, 2020). This is above the 20% recommended by the WHO (WHO, 2010). The health system is unable to generate enough resources to meet expenditure needs, which leads

to challenges with payments and reimbursements. Delayed payments for services rendered by health institutions leads to some health centers refraining from joining the NHIS, providing substandard services or holding back services to NHIS card holders (Sodzi-Tettey et al., 2012; Awoonor-Williams et al., 2016). As a result, some people may be card holders but still unable to access care because of geography or other related limitations and this also increases out of pocket payments at the point of service (WHO, 2012).

All these show that health insurance in general and the NHIS in particular has not been brought down to levels that people found in the lowest socio-economic quintiles (poor) can afford and be willing to pay without facing financial challenges (Kusi et al, 2015). This also indicates that cost of services and premium continue to pose challenges to enrolment and retention (Amporfu, 2013; Jehu-Appiah et al., 2011) and has not been brought down to levels that poor people can pay unlike Microfinance. Low enrolment, retention and revenue mobilization makes the health financing structure of the NHIS unsustainable in its current form (Alhassan et al, 2016).

Several attempts have been made by the MOH and NHIA to increase revenue collection through outreach programmes such as visiting churches, markets and rural areas to register people and the introduction of a mobile app for the renewal of subscription on the NHIS. The introduction of the Government Integrated Financial Management System (GIFMIS), in 2010 by government was also aimed at ensuring financial efficiency and accountability by reducing the leakages and financial mismanagement. In spite of all these proven efforts to improve revenue mobilization for the health sector, resources for the sector are still inadequate making the operational and financial sustainability of the NHIS in particular a major concern (Alhassan et al, 2016). Calls have been made for a more innovative approach to increasing revenue especially from the informal sector (WHO, 2010).

Microfinance institutions have successfully broken the barriers associated with reaching under-served populations by allowing people in the informal sector especially, to save and borrow smaller amounts of money at their own convenience (Lorenzetti et al, 2017). Theory predicts that getting access to credit and savings facilities by the poor helps them pull themselves out of poverty (Marmot et al, 2008). Access to financial services allows households to smooth consumption and reduce the impact of sudden income related issues like ill health (Beck, 2015). Microfinance serves as a platform that has become important in the ability of poor households to withstand financial shocks (Freedom from Hunger, 2014). The different models used by MFIs to deliver their products ensure a constant engagement with clients whether individually or through groups. The doorstep methodology they use gives them access to not only the informal sector, but also very rural areas in the country. The Microfinance model should therefore theoretically facilitate access to health care among poorer populations (Mtamakaya et al, 2018).

Micro-finance institutions have facilitated health financing by offering emergency health loans, health savings products and microinsurance (Megan, 2010). Though MFIs have typically provided savings and credit facilities, they have expanded their scope to include health education, health insurance and linkages to other services (Ruducha & Jadhav, 2018). Recent studies have cited the positive effects of MFIs on the health indicators such as women's health, child mortality, HIV-related issues and general health knowledge (Kennedy et al, 2014; Arrivillaga & Salcedo, 2014; Malley & Berk, 2014).

However, the integration of health-related services in Microfinance operations has been limited. One reason for this limitation is the ability of MFIs to operate efficiently (Leatherman, et al, 2012). Though MFIs have a dual objective (social and financial), recent transformation in the sector is pushing MFIs towards the achievement of financial efficiency

as a requirement to stay sustainable. As a result, questions have been raised about the efficiency of Microfinance institutions and their ability to reach more people in the poorer segments of the population (Hermes et al, 2011). Though empirical studies have been mixed on the possible trade-off between efficiency and outreach, most of them point to the fact that the drive towards efficiency reduces the ability to reach poorer people because it is more expensive to serve them (Bharti & Malik, 2022; Gupta, 2014; Cull et al, 2011).

This study addresses the challenge of revenue mobilization under the NHIS through premiums by focusing on the current structure of the NHIS and its ability to partner with MFIs to increase revenue mobilization from the informal sector, the role that MFIs are already playing in health financing and the willingness of the people to participate and pay for health insurance through MFIs and the implications on revenue mobilization and consequently the sustainability of the NHIS.

The study contributes to the health financing and microfinance literature in two ways: first it gives evidence of how an innovative model like the microfinance platform can be used to improve health financing. Secondly, it also adds to the debate on the efficiency of MFIs and its effect on outreach.

1.3 Research Questions and Objectives

In light of the foregoing, the research questions to be answered by this study is:

- What role can MFI's play to increase health financing in order to reduce health risk in Ghana?
- What is the efficiency level of MFIs?
- What are the factors influencing household's willingness to participate and pay for health insurance.

1.3.1 Objectives

The main objective of this study is to examine the role that MFIs can play in reducing health risk in Ghana.

Specifically:

- To conduct a cost efficiency analysis of Micro-finance institutions in their current operations.
- To examine the factors that influence the participation of households in paying for health insurance through MFIs.
- To examine the role of MFIs are playing in the health financing structure in Ghana.

1.4 The relevance of the Study

Many studies have been done on health financing in Ghana though much of that is concentrated on the sources and dynamics of funding and the nature of the structure of financing. Studies that have been done on the Social Health Financing framework (the NHIS) have also mostly concentrated on issues of policy and practice, the challenges and successes of the scheme. Though innovative techniques of improving health financing have been advocated, not much has been done on how some of these strategies will actually work. This gap in literature is especially evident in West Africa when compared to Eastern African countries like Kenya where studies have been done on the effects of microfinance interventions on health insurance uptake and outcome. This study will therefore add to the limited number of studies that are directed at understanding how an innovative strategy like the Microfinance platform can be used to improve health financing.

The study is novel in the Ghanaian context in that, no study has been done on the use of MFIs as a strategic partner in offering NHIS to people in the informal sector. Also, no study has looked at the cost-efficiency of MFIs in Ghana using a cross-sectional data. This study will also contribute to the formulation and implementation of policy on improving access to and

cost of the NHIS in Ghana by helping local authorities in designing and implementing a health financing policy that is relevant to our context as they work towards the Sustainable Development Goals on health. A Microfinance incorporated NHIS design will help policy makers to reach the informal sector, improve revenue collection from that sector in the form of premium and increase their access to healthcare.

1.5 Organization of the Study

The study is organized in seven chapters. Chapter one gives a background to the study. The second chapter gives the theoretical background of the study and reviews literature on relevant areas such as the determinants of health insurance uptake globally and specifically in Ghana. It also situates Microfinance as an alternative way of reaching the informal sector for improved health financing. It looks at the debates on a possible trade-off between financial sustainability and social outreach. This chapter concludes with a conceptual framework that summarizes the theoretical and empirical reviews. Chapter three outlines the regional and district profiles of the study site(s). It also documents the methodology employed in the study. This includes the sampling, methods of data collection and the instruments to be employed. Chapter four presents a cost efficiency analysis of a cross-section of MFIs in their operations and its implications. Chapter five identifies the determinants of health insurance uptake and the willingness to pay for an MFI facilitated health insurance. In chapter five, the role of MFIs in the health financing structure from actors in the sector is examined and discussed. The last chapter summarizes the major findings, draws conclusions, gives policy recommendations and suggests areas for further research.

CHAPTER TWO

LITERATURE REVIEW, THEORETICAL AND CONCEPTUAL FRAMEWORK

2.1 Introduction

The chapter explores the theoretical and empirical literature on health financing in Ghana, the determinants of willingness to pay for health insurance and the role of microfinance institutions in bridging the social inequality gap in access to healthcare. The chapter commences with the definition of the major concepts used in the study. Four theories that can help situate the debates on the role that MFI's can play in health financing and the factors that determine WTP are presented. These are, the public choice theory, expected utility theory, theory of planned behavior and the concept of efficiency in Microfinance.

The chapter then goes on to provide a background of the Ghanaian situation by giving an overview of the health sector in Ghana. The various health financing options available to countries is described. The historical development of health financing in Ghana is given to situate the health financing reform journey of Ghana since independence.

The chapter goes on to review works on insurance uptake in general and the factors that determine people's willingness to participate and pay for health insurance. Whiles it is unarguably an established source of funding; several factors may affect the decision to participate and pay for it, thereby affecting its viability as a funding option. The chapter then looks at the body of works that show the changing role of microfinance institutions and the linkages between the microfinance sector and the financing of health care. It looks at arguments around the sustainability of Microfinance institutions and the achievement of their social outreach goals, the possibility of a trade-off and what influences the efficiency of MFI's. A conceptual framework is presented at the end of the chapter to give a figurative

presentation of the relevant theories, concepts and variables in the study and how they relate to each other.

2.2 Definition of key concepts

Health financing (HF) is the "function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system"; the purpose "is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care" (WHO 2000). This definition was further expanded in 2007 to include the effect on poor populations: "A good health financing system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient" (WHO, 2005).

Health Insurance (HI) is insurance "coverage that provides for the payments of health benefits as a result of sickness or injury. It includes insurance for losses from accident, medical expenses, disability, or accidental death and dismemberment" (Pitacco, 2014). **Social Health Insurance** (SHI), is a form of health finance that manages the health care of people by pooling the risk of people as well as the contributions of populations, businesses and the government on the other hand (WHO, 2010).

Micro-finance, according to ACCION International (2018). is "banking and/or financial services targeted to low- and moderate-income businesses or households, including the provision of credit". Bhanot et al (2012) also defines it as the process through which vulnerable groups are given access to affordable financial services. In other words, it is "financial services for poor people, who often lack access to tools most of us take for granted

– a debit card, a savings account, basic insurance or even a nearby bank branch" (Abaluk, 2012).

Willingness to Pay (WTP) is the maximum price at which a consumer is willing to pay for a particular good or service. This means that no matter the price of the good or service and where it is coming from the consumer is not willing to pay above the stated price (Wolf et al, 2020).

Cost-efficiency is the minimum cost incurred by a firm in the production of a certain level of output given a certain input price (Abdulai and Tewari, 2016).

Financial Sustainability is the ability of an MFI to generate enough income to cover all its expenses and have something left to generate its growth without dependance on subsidies (Ayayi and Sene, 2010)

Social Outreach is the depth and breadth of the range of services provided by a microfinance institution (Rao and Fatimo, 2014). The depth refers to the poverty levels of clients whiles the breadth takes account of the scale of an MFI's operations.

2.3 Theoretical Review

Several social and economic theories explain the decision to provide or subscribe to a health insurance cover and the factors that determine willingness to pay for a particular type of health insurance. However, for the purpose of this study, four will be utilized. The public choice theory focuses on the ability of the state to collaborate with the private sector and in this case the Microfinance sector to provide a social health insurance scheme whiles the expected utility theory and the theory of planned behavior focuses on the determinants of WTP for health insurance. The concept of efficiency in Microfinance provides the context in

which MFIs can be expected to play a facilitating role in health financing without moving out of their core business.

2.3.1 Public Choice Theory

The work of government is to manage communal properties or public goods in a manner that will benefit everyone through the formulation of public policies. Samuelson (1954) defines a public good as any good "which all enjoy in common in the sense that each individual's consumption of such goods leads to no subtraction from any other individuals' consumption". In other words, the use of the good does not exclude others from also using it. Public choice policy hinges on the premise that actors in the political space, be it the government, voters, politicians, bureaucrats are not free from bias in their work for the public good, but that aside their interest in the collective welfare; they have their own self-interest as the major motivating factor (Wiseman, 1990). This self-interest could be the influence of powerful interest groups. In the provision of social health insurance therefore, governments may be interested in meeting the healthcare needs of the population however, other interests like that of actors like the donor community could influence how this policy is implemented. Another premise of the public good theory is that the contributions of other actors to the provision of a public good is allowed and actors are willing to cooperate (Liebe et al., 2011). This willingness to co-operate is hinged on ideas of fairness, reciprocity and the kind of actors in that space (Ostrom, 2000). According to Ostrom, some of these actors are "conditional actors" who adjust their behavior and contributions based on how others in the space behave. Tied in to this willingness to contribute is also the concept of trust. Ostrom (2000) posits that those who trust others to contribute to the provision of a public good or service tend to think that they are not the only ones contributing and so much more willing to contribute.

Social health insurance, being a public good, is financed from the public purse, however, it must not be assumed that the government's only interest is to ensure financial health protection of its citizens, but there may be other compelling reasons, which may alter the implementation of social health insurance as a strategy. Being a public good does not mean that only government must implement it, private service providers can also be contracted or used as a platform to deliver it to the populace (Anomaly, 2015). Other actors are willing to cooperate once they trust the motives of government and see their contribution as a social responsibility to the improvement of the wellbeing of people. In such an instance, regulation and enforcement of protocols are important to the success of the collaboration between the public and private sectors (Riviere-Cinnamond, 2004). Through the Public choice theory, this study examines the role of the various actors in the health financing space and what others in the space think the role of MFI's can be. It also situates the role the MFIs themselves think they can play and the success factors to such a collaboration.

2.3.2 Expected Utility Theory

Neoclassical economic theories have been an important descriptor of human behavior when it comes to decision-making. The Consumer Utility Maximization theory for instance posits that rational consumers who are well informed of market conditions make decisions or choices that maximize their utility subject to the price of the good, their income and preferences (McFadden, 1974). The quantity of goods that a rational consumer buys is influenced by the changes in price of that good and the changes in the available income of the consumer (Begg et al., 2000). As any normal good, health insurance has a positive inelastic relationship with income. The higher the price of premium, the lower the demand and the lower the price of premium as opposed to other alternatives, the higher the demand (Begg et al., 2000).

This implies that the rich are likely to insure because they are price insensitive. They place more value on the quality of the services they consume and so will still consume insurance irrespective of the price change unlike poor households. Though this theory forms the basis of most economic theories, it has been criticized by behavioral economists who mostly agree that real people do not always make rational decisions with utility maximization in mind but their decisions are subject to biases and made under conditions of uncertainty, leading to a deviation from the norm (Cameron et al., 1988). Health insurance decision, according to Cameron et al (1988), is therefore based on uncertainties surrounding a consumer's future health status and the rewards expected from uptake. Behavioral theories that describe decision-making under uncertainties such as Expected Utility better explain insurance uptake decision (Schneider, 2004).

The Expected Utility Theory (EUT) was first espoused by Bernoulli (1738) but given more definition and mathematical foundation later by Von Neumann and Morgenstern (1944). The theory states that "the decision maker chooses between risky or uncertain prospects by comparing their expected utility value'' (Mongin, 1998). The theory assumes that consumers are risk averse and so more likely to take less risky options that also has little impact on their resources. In other words, consumers do not always pay for a good in order to maximize the amount of goods they get in return but rather pay in order to maximize the expected satisfaction and value that good will bring. This is because as at the time of buying an insurance cover, they do not know whether they will be ill in future or not and how much it will cost them at that time to receive treatment. Under this theory, the demand for insurance is based on the decision to pay premium in order to enjoy uncertain benefits and the uncertainty of loss when not insured (Hsaio & Shaw, 2007). The theory makes the assertion that the higher the level of risk aversion the more likely to purchase insurance. Closely related to this theory is the Prospect theory. Despite the ability of the economist to explain

what people value with economic theories like the Expected Utility theory, insurance uptake is still very low. As a result, psychologist, have tried to use attitude behavior paradigms like the Theory of Planned Behavior (TPB). The difference between economic theories like Expected Utility and socio-psychological theories like TPB is that, in economic theories, preferences are based on choices made between alternatives while psychologist use attitude to ascertain the desirability of a single action (Liebe et al., 2011).

2.3.3 The Theory of Planned Behavior (TPB)

The theory of Planned Behavior is an extension of Ajzen and Fishbein's (1980 and 1975) theory of reasoned Action. This theory has been used to understand the way people initiate and sustain certain voluntary health behaviors (Ajzen, 1991). The theory posits that there is a strong relationship between one's intention to engage in an activity or behavior and the actual engagement in that behavior. This intention is further influenced by several psychosocial determinants such as "attitudes" (subjective assessment of the outcome of behavior), "subjective norms" (perceived social pressure to perform the behavior) and "perceived behavioral control" (perception of control over the performance of the behavior). Attitudes, subjective norms and perceived behavioral control are all part of the characteristics of human behavior and has the potential of changing overtime. Despite the extensive use of the TPB in predicting health behavior (Moshi et al., 2020 Nosi et al., 2014, Nosi et al., 2017, Rochelle et al., 2015), little has been done on its applicability to determining health insurance uptake. This is one of the gaps that this study seeks to fill. The use of the variables of this theory in this study is important to help us explain the internal factors, outside socio-economic and demographic factors and how they also influence continuous renewal of voluntary health insurance subscription.

2.3.4 The concept of Economic efficiency in Microfinance

Microfinance started on the basis of microcredit in the early 1970's. The concept of Microfinance was first developed at the Microcredit summit of 1997 (Rahman, 2004). In theory, it emerged as an important bridge between the formal banking system and informal money lenders (Weijermars, 2014). This was on the heels of success in Muhammed Yunus' experiments in Bangladesh in the 1970's (Thai-Ha, 2020). Muhammed Yunus was the first to institutionalize the Microfinance approach through the establishment of the Grameen Bank in 1976 (Encyclopedia Britannica as cited by Thai-Ha, 2020). Microfinance is expected to transform the lives of people in the informal sector who do not have collateral and are not wealthy enough to be engaged by the formal banking institutions. Microfinance was expected to facilitate the social and financial inclusion of non-wealthy people (Armendariz de Aghion & Morduch, 2010; Milana & Ashta, 2020). By providing access to small loans, Microfinance provides the entrepreneurial poor with the ability to start a business or to expand an existing one thereby helping to lift them out of poverty (Nogueira et al., 2020).

In the classical Micro-credit model, four common features could be identified (Armendariz de Aghion & Morduch, 2010). The first is group lending through joint liability of group members. This feature was to reduce issues of adverse selection and moral hazard among clients. It assumed that clients will serve as checks on their colleagues by encouraging the right use of the loan and also facilitate repayment (Al-Azzam et al., 2012 and Atanasio et al., 2011). Secondly, clients were expected to make frequent repayment of loan installment without grace period. It is assumed that such frequent payments will lead to self-discipline which some clients lacked. Thirdly, access to future loans was conditioned on successful and quick payment of the current loan. Lastly, the target was mainly women, who had been traditionally sidelined in the formal banking system. Over the years however, the microfinance industry has evolved from the original concept of just giving small loans to

poor entrepreneurs (Thai-Ha, 2020). This revolution also shifted focus from subsidy-driven micro-credit schemes to self-sufficient microfinance institutions (Robinson, 2001). The success of some Microfinance institutions in being profitable and the reduction in donor-financed microfinance led to increased calls for MFIs to be profitable (Milana & Ashta, 2020). As a result, average loan sizes have increased, individual lending has replaced group lending and the competition between MFIs has also increased (Milana & Ashtra, 2020; Ashta, 2016). This increase in commercialization has led to fears that MFIs may not be able to serve the poor who are their primary target (Hermes et al., 2011). There has therefore been pressure on MFIs to achieve efficiency in order to play their dual role of social outreach and financial sustainability.

Efficiency in this context is the ability of an MFI to allocate resources in such a way as to produce the maximum output and to reach the underserved populations especially with the much-needed financial service (Balkenol, 2007). Efficiency can be described in a technical or an allocative dimension (Farrell, 1957). In Microfinance, technical efficiency is estimated by studying how well an MFI is able to allocate its resources such as staff, assets and subsidies in order to produce valued services to a large number of clients and especially the poor (Kumar & Sensamar, 2017; Annim, 2010; Balkenhol, 2007). Cost efficiency is defined by Abdulai and Tewari (2016), "the minimum cost incurred by a firm to produce some level of output given input prices". Being efficient is important because it helps you to keep your cost low whiles freeing up resources for investment that will help the institution to expand (Kumar & Sensamar, 2017). In other words, an efficient MFI it is assumed, is able to concentrate on innovative products and ways of delivering the products to clients. This will reduce the unit cost of production because of economies of scale and will in turn facilitate the ability to reach more clients, especially deprived ones. Though MFIs have a double bottom-line (social and financial goals), it has been debated widely how these two goals affect efficiency. While

several studies have discussed how social responsibility goals affects financial efficiency negatively, others, have found evidence that suggest a positive relationship between the two (Bharti & Malik, 2020; Mia et al, 2019; Morduch, 2000; Otero & Rhyne, 1994).

2.4 Overview of the health sector in Ghana

Ghana's health sector is on a mission to achieve universal health coverage. The health sector has seen improvements over the years with increasing economic growth (Adisah-Atta, 2017). This growth is in tandem with growth experienced in the health sectors in other African countries (Saleh, 2013). For instance, maternal mortality declined from 350 per 100,000 in 2013 to 319 in 2015 against 587 per 100,000 live births for Mali (Adua et al., 2017). Ghana is currently in a demographic transition, which has implications for the epidemiological and nutritional wellbeing of the population. The structure of the economy is a young one coupled with increasing life expectancy. World Bank (2011) estimates that by 2030, there will be more 64-year-olds in Ghana than when compared to 2010. Whiles the communicable diseases burden is reducing, Ghana is seeing a rise in non-communicable diseases such as diabetes, cancer and cardio-vascular diseases (Saleh, 2013). The demographics and epidemiology changes being experienced will put pressure on the existent health system and resources (Adisah-Atta, 2017).

The Ministry of health is the government organization responsible for the provision and management of the health care needs of Ghanaians. The Ministry is mandated with the formulation of health policy, monitor, evaluate and mobilize resources for the health sector. Prior to the enactment of an Act of parliament, Act 525, the MOH was also responsible for the promotion, prevention, providing curative and rehabilitative health care. However, that function after the enactment of Act 525 has been delegated to the Ghana Health Service and Teaching hospitals, making it the implementer of public sector health care delivery. This Act

was to decentralize, strengthen and streamline health care delivery in Ghana. Ghanaians access health care from both public and private providers.

The public sector cares for majority of the health needs of the Ghanaian population, whether at the primary, secondary or tertiary level. Making the Government the main health care provider in Ghana, owning about 56.92% of the health facilities in the country (GHS, 2018). The health care system operates on a multiple-leveled, decentralized system. These are the National level, regional and district level, health facility and provider level and the community and patient level (Amoah, Nyamekye & Owusu, 2021). Whiles most African countries have a three-tiered healthcare delivery system, Ghana, operates a four-tiered pyramidal health care system under central national control. The regional hospitals are at the apex of the pyramid, depending on the district hospitals for their patient load. The regional hospitals deliver curative services. The district level provides leadership to the community health centers and health post/health stations. This makes the district level very important in the management of the Public Health Care system (PHC).

The health centers at the sub-district level provide both preventive and curative services. The sub-district level provides outpatient services to relieve the district and regional hospitals of all but their most specialized functions. The community and household level are at the base of the pyramid and caters for basic services such as the treatment of minor injuries (Bruce, 2003). The introduction of the Community-based Health Planning and Services (CHPS) compounds has facilitated some interventions at the local level. The PHC principle linking these various levels of care is to try to treat people as close to their homes as possible and treating minor issues at the lower levels in order to allow higher level facilities play their specialized roles (Jahn and De Brouwere, 2001).

The Private Health care sector provides about 35% of the health services in the country and is mainly focused on general medicine and the provision of in and out-patient services (Saleh, 2013). The private sector is playing a crucial role of bridging the gap in the provision of health care in Ghana and about 51% of Ghanaians use private health care facilities when ill (Morrison, 2016 as cited in the Ghana National Health Care Quality Strategy, 2016). According to the Ghanahospitals (2020), there are 1,356 private hospitals in Ghana. However, private hospitals are mostly located in urban areas, are more expensive than public institutions and totally absent at the local community level. Kumasi, Accra and Tema are the localities most populated with private health facilities (Pharmaccess, 2016). The main challenge for the Private health care sector has been the quality of care and services offered in these facilities especially for those situated in low-income areas (Adewoyin et al., 2018). Though Ghana's healthcare system is well developed, it faces several challenges. Notable among the challenges is the standardization, implementation and monitoring of policies. Policies are sometimes well drawn but implementing it and monitoring to ensure that the right things are done is sometimes inadequate (Saleh, 2013).

2.4.1 Health Financing Mechanisms

There have been intense debates on the best form of health financing strategy that countries could adopt. The consensus is that, whatever the strategy, it should be sustainable, efficient and effective in caring for the needs of all segments of the population (MOH, 2015). This ability to design, implement and operate a health financing system that sees to all the health needs of all the various segments of the population is the challenge that most countries face (Addae-Korankye, 2013). Health systems aim to impact wellbeing through three main functions whether stated explicitly or implicit in policy documents. These functions are raising revenue, pooling risk and purchasing services (Kutzin, 2001 as cited in Stabile &

Thompson, 2014). The decision on who to cover, what services to cover and how much of the cost of service to cover is present in all these functions.

There are three models of health insurance financing: the classical social health insurance, Community or Mutual Health insurance and private health insurance. These models take five basic forms. These are: general taxation, social health insurance, voluntary or private health insurance, out-of pocket payments and donor funds (Onwujekwe et al., 2019; Szigeti et al., 2019). Social health insurance is sometimes separated from community-based health insurance but here, it has been put together because they have the same basis except that social health insurance is mandatory in principle. Generally, developing countries have the tendency of depending on a mixture of financing options instead of depending on just one type of financing. The financing options adopted are usually dependent on how effective, efficient and equitable the strategy is and must appeal to the wider population (Addae-Korankye, 2013).

General taxes are used to finance health care everywhere irrespective of the major source of funding (Onwujekwe et al., 2019). Health financing through taxation is very common in Europe and forms the main source of finance in several countries (Reeves et al., 2015). Countries such as Finland, Norway, Sweden, Belgium, Bulgaria, Denmark, Italy and the United Kingdom have been known to use general taxation as the main funding source of their health care systems (Addae-Korankye, 2013). These revenues are collected through income tax, value added tax, import and export duties, corporate tax among others. When taxation is adopted as a model, health care services are paid for through the central government. Taxation as a source of financing health care is known to be stable and reliable (Reeves et al., 2015).

For instance, Reeves et al (2015) in their estimation of the relationship between tax revenue and its effect on health care found that countries that are able to get much revenue from taxes spend more on healthcare. However, studies have also found that it has the tendency to be affected by public sector budgetary negotiations and government focus (Addae-Korankye, 2013). Stabile and Thompson (2014) therefore suggest that governments separate funds for financing health from other forms of public spending by earmarking funds for the health sector. The financing of health systems through taxes tends to redistribute income where the rich pay more in taxes than the poor. This system is found to be more equitable through income redistribution than Social Health Insurance (Wagstaff, 2010).

Social Health Insurance policies are mandatory/voluntary contributions made to a common fund (Doetinchem, Carrin & Evans, 2010). Though the most common form of this type of insurance involves making contributions, there are some variations that are mostly dependent on the collection agents and the role that they play in the system (Stabile & Thompson, 2014). Whiles some countries like Ghana, Hungary contributes to a single common fund, others like France, Austria, and Czech contribute to either independent fund managers or a decentralized national fund system. Countries that have a social financing system usually use general taxation to cover the premiums of non-workers and the exempt (Szigeti et al., 2019). It is the contribution of government to ensure the financial sustainability of the scheme and hence the use of tax revenue (Doetinchem, Carrin & Evans, 2010). Advocates of Social Health insurance insist that this kind of funding is not subject to government interference and the administration and management of it is much more transparent because it involves independent bodies who make their own spending and budgetary decisions (Stabile & Thompson, 2014).

By the medical savings account system, people pay a fraction of their income into a health account through which deductions are made when they fall ill. This type of insurance is not very common and is usually supplemented with other forms of insurance. The medical savings account is not for people with low incomes and so not a good mechanism to protect poor people against health risks when the need arises. This is very similar to private insurance, which is individual and voluntary. Private Health Insurance is usually employer sponsored or voluntary and so more popular in the formal sector. Private voluntary Insurance for the informal sector is rare and usually for high-income individuals (Wouters & McKee, 2017). With this system, you pay depending on the risk you pose. For instance, older people and sick people pay more than others. The duration of contract usually lasts for only one year. Private insurance does not account for much in the health care sector except in the United States where it contributes about a third of the total health financing (Rice et al., 2018). Though it's contribution in some countries may be big, the total amount financed by the sector may be very small (Wouters & McKee, 2017).

Out-of-pocket payment is the direct payment that a person makes at the point of service delivery. This is also popularly known as "cash and carry". In other words, you pay for what you use. These services could be partially covered by health insurance or not covered at all. This system does not allow for cross subsidization between the rich and poor. The aim of out-of-pocket systems is to raise revenue as well as a way of achieving efficient allocation of health resources (Stabile & Thompson, 2014). Out-of-pocket payment is seen as a regressive health care financing method because both the poor and rich pay the same for health care services despite the disparities in their income and ability to pay (Akazili, 2012).

Loans, grants and donations in health financing are usually in the form of bilateral and multilateral assistance to low and middle-income countries (Dieleman, 2017). This form of

donation forms a substantial percentage of the health financing in these countries and ranges between 20% to 70% of funding in African countries (Ravishankar et al., 2009). In Uganda for instance, donor funding constitutes about 35% of total health spending (Orem & Zkusooka, 2010). Donor funding is not constant as donor interests vary and affect it. Loans and grants have to be paid back and this can sometimes be difficult in situations where the government is not charging user fees for the consumption of health services (Ravishankar et al., 2009). The combination of revenue sources that a country uses is dependent on various trade-offs of efficiency, equity and universal coverage and may not directly impact cost of health care and the quality of services (Stabile & Thompson, 2014). The way health funds are mobilized and managed is also dependent on the nature and role of the actors in the sector.

The increase in the health economy globally has led to an increase in the number and type of actors involved in the financing of health care (McCoy, Chand & Sridhar, 2009). The global health financing space is a complex one and whiles some play specific roles others play various roles simultaneously. McCoy et al (2009), classify the functions of global health financing actors into providers, managers and spenders. The function of "providing'' is to generate resources to finance global health. McCoy et al (2009) categorize actors under this function into: donor country governments like the United States and Germany; private foundations like the Bill and Melinda Gates, the general public and businesses/private corporations like Vodafone and MTN. The function of "managing" is interested in gathering all the funds from various sources as well as putting in place mechanisms to get those resources where it is needed. There are about six categories of actors performing this function (McCoy et al., 2009). They are the bilateral aid agencies such as USAID and JICA; partnerships on global health such as the Global Fund; Intergovernmental organizations such as the IMF and World Bank; Non-governmental organizations such as World Vision and Basic Needs; private foundations; and Business/corporate entities. The function of

"Spending", is focused on the direct dispensing of resources for the purchase and use of health care goods and services. Six main actors can be found in this category (McCoy et al., 2009). Health focused multilateral agencies; private sector, for profit organizations; governments and civil societies of low- and medium-income countries.

2.4.2 Overview of Ghana's Health financing Reforms

The government of Ghana, after independence, abolished all forms of payments for health care and set up the National Health Service (NHS) as the body to oversee the health sector (Addae-Korankye, 2013; Adamba, 2011; Mensah et al., 2010). Healthcare delivery was free for all and did not require any payment at the point of service delivery. This system was totally tax funded (Addae-Korankye, 2013). The focus was on the provision of primary health care by promoting a preventive care strategy (Akazili, 2010). This system of finance was thought to be progressive as the rich paid more tax than the poor. This prevented the poor and rural folks from spending too much of their household income on health thereby protecting them from catastrophic health expenses (Adamba, 2011; Adisah-Atta, 2017). However, because of the concentration of health facilities in the urban areas as compared to the rural parts of the country, urban dwellers benefitted more from the system than their rural counterparts (Adamba, 2011). The system could also not be sustained because of inadequate funding, which affected the quality-of-service delivery and led to the deterioration of health facilities (Addae-Korankye, 2013). The government was therefore forced to seek other forms of revenue to finance the health sector.

In 1969, the government enacted the Hospital Fees Decree to charge a token as user fees at the point of service (MOH, 2015). This decree was amended in 1971 into the Hospital Fees Act 387. With this act, the government hoped to raise some revenue without burdening the populace. But the fee was so small that it could not do much to help the government increase

their health revenue (Addae-Korankye, 2013). With the general downturn of economic conditions like inflation and unemployment, the government of Ghana sought help from the International Monetary Fund (IMF) and World Bank to stabilize the economy (Adisah-Attah, 2017). This led to the implementation of the Economic Recovery Programme (ERP) in 1983.

The implementation of this programme meant a reduction in government spending on social services, deregulation of the economy, and reduction in the size of the civil service and trade liberalization (Adisah-Attah, 2017; Adamba, 2011). The Hospital Fees Regulation was introduced in 1985 to broaden the range of services that consumers paid for. This included the full payment for drugs, laboratory services among others in all public institutions. This was to recover 15% of operating cost in order to increase the revenue from the health sector but this also failed (MOH, 2015). Full-cost recovery popularly referred to as the ‘’cash and carry’’ system was introduced in 1992. This according to proponents was to reduce the over reliance of the health sector on government funds, increase its own revenue, prevent over use of facilities and improve quality. The percentage of total government spending on health dropped from 11.1% in 1991 to 6.9% in 1995 (Nyonator & Kutzin, 1999 as cited in Adamba, 2011). In response to the effect this could have on poor populations, the IMF asserted that the fees paid by the high-income populations were to be used to cross subsidize the poor whiles exemption schemes were to be used to cover the very poor in order to prevent them from incurring catastrophic health care costs (Adamba, 2011; Addae-Korankye, 2013).

Contrary to what proponents of full cost recovery promised, there was widespread inequality in access to health care as a result of the introduction of user fees (Johnson & Stoskopf, 2009). This made financial accessibility one of the major barriers to seeking health care in Ghana. Recognizing the immense challenges and the effect thereof on the economy, the government, under the Ghana Poverty Reduction strategy promulgated the National Health

Insurance Act (NHIA Act 2003: Act 650) (Mills et al, 2012; Akazili, 2010). This led to the implementation of a National Health Insurance Scheme in 2004 with the aim of making healthcare financially accessible to all especially the poor (NHIA, 2008). Unlike other countries that took decades to transition into universal coverage of their health system, Ghana was able to build on the structures of its Community-based Mutual Health Insurance plans into District Mutual Health Insurance Schemes in its first five years (Schieber et al., 2012). This also came with a standardization of the benefits package.

The source of funding for the NHIS is diversified supplying stable revenue overtime (Schieber et al., 2012). The three major sources of finance are; 2.5% deductions from the SSNIT contributions of formal sector workers, 2.5% Value Added Tax on goods and services and premiums from the informal sector. Other funding sources include, government budgetary allocations, donor funds, grants, gifts and interest from the investment of NHIS funds and allocations to the central exemptions fund (Adisah-Atta, 2017; Adamba, 2011).

The population below 17 years of age, above 70 years old and those identified as very poor were excluded from making any form of payments. This locally thought alternative health financing mechanism was to remove inequities in health care by the removal of any-cost sharing component beyond the premiums paid by subscribers. The design of the scheme also included having different premiums for different economic categories of the population. Implementation of the scheme has however not been smooth because of the lack of data on the large informal sector where majority of the population can be found leading to a flat premium rate irrespective of income (Akazili, 2010). Though the scheme is mandatory by law, those in the informal sector are to register voluntarily. Several additions have been made to the scheme since its inception. There has been an expansion in the number of providers through the accreditation of private health facilities who were not allowed to offer the service

when the scheme started. The Free Maternal Health Service introduced in 2008 is also one very notable addition to the scheme (Twum et al., 2018).

As a result of these efforts, the scheme was able to exceed its target of 40% membership by the end of its fourth year (Addae-Korankye, 2013; Adamba, 2011). This increase in the number of subscribers in the first five years of the scheme put a lot of burden on the scheme. This was not limited to the financial burden of the scheme's huge expenditure alone, but also political interferences (Schieber et al., 2012; Akazili, 2014; Fenny, Yates & Thompson, 2018). Though the financing sources are diversified and so likely to provide a stable source of funding for the scheme, the funds are not enough to lead to financial sustainability in the long run.

2.4.3 Ghana's Health spending

The total budget for the health sector in 2019 was about 6 million Ghana cedis (MOH, 2019). Domestic health expenditure as a percentage of health expenditure declined to 38.9% (2018) from 42.5% in 2008 (Sasu, 2021). The Government of Ghana (GoG) funding for the health sector grew by 18% per annum between 2016 and 2019 and expected to grow by 13% between 2019 and 2021 (MOH, 2019). This is lower than the projected figure of 23% in the total GoG budget. Ghana's health expenditure as a share of GDP in 2018 was 3.5% (World Atlas Data, 2021). All these goes to show that government is still not setting health as a priority when compared to other sectors of the economy. The primary source of funds for Ghana's health sector is internally generated funds (IGF) which is slowly replacing donor funds in health financing. Donor funding in 2017 was 19% of total health funds but is expected to decline to 1% by the end of 2022 (MOH, 2019). The dependence of the health sector on internally generated funds has implications on the sustainability of the NHIS which is the main contributor to IGF.

2.5 Insurance Uptake in Africa and the importance of Health Insurance

Insurance generally provides financial protection for people in the event of an unforeseen occurrence by reducing the amount that they need to protect them when the unknown finally occurs. At a specified amount of money based on the risk the client presents, known as a premium, the risk is transferred to a third party. This third party executed the terms of the contract when something happens. Insurance comes in two forms i.e., life and none-life insurance (Capgemini, 2008). Life insurance usually involves the protection of life whiles non-life insurance includes property insurance, crop insurance, travel insurance among others. The growth of the insurance sub-sector has attracted a lot of attention to its relationship with economic growth. The growth of the sector outpaced the world economy between the periods 2000 to 2008 (Outreville, 2011). World insurance premium was 4.57 trillion USD in 2011 (Olayungbo & Akinlo, 2016).

Insurance penetration on the African continent generally has been slow as compared to parts of the world. Insurance penetration in Africa is estimated at only 1.7% (Statista, 2017). South Africa alone accounts for about 80% of all premiums in Sub-Saharan Africa with an insurance penetration of 16.99% as compared with Nigeria, the largest economy in Africa accounting for only 0.3% in 2017 (Statista, 2017). Whiles South Africa maintains the largest share of non-life insurance on the continent, Morocco, has the largest share of life insurance. Despite the low levels of uptake, the value of insurance premiums accounted for 43 billion USD in 2015 (Statistica, 2017). This is an indication that it is a growing sector that has substantial promise. There is a large diaspora coming back home and a growing middle class who will drive the increase in insurance uptake on the continent. The low uptake of insurance on the continent has been attributed to low incomes and a trust deficit. People do not trust insurance providers because they do not believe their claims will be paid on time and when it is paid may not be a significant amount (Olayungbo & Akinlo, 2016). The use of technology,

such as mobile phones and social media as well as cheaper ways of distributing premiums will help increase insurance uptake in Africa (Statistica, 2017). The improvement in insurance uptake generally has also improved the focus on health insurance.

Health insurance, according to Osei-Akoto and Adamba (2011), is one of the practicable health financing options available to countries. Countries are experimenting with various forms of health insurance because it is preferable to out-of-pocket payments. However, the penetration of health insurance especially in the wide informal sector where the most vulnerable groups are found is still very low (Dror & Firth, 2014). Insurance actors who venture into the informal sector, like NGOs, are limited by a lack of understanding of their needs and the complexity of dealing with that sub-group.

The pros and cons of taking a health insurance cover is a well-documented area in health insurance literature. Health insurance is important in ensuring that people get access to health care without being impoverished (Owusu-Sekyere & Chiraah, 2014). People's wellbeing is particularly improved when health cost is paid for in advance, removing the financial barrier and anxiety of paying for health care when a crisis arises (van Wiessen, van Kleef & de Ven, 2016). Health insurance increases the utilization and timely seeking of formal health services, which also leads to desirable health outcomes (van der Wielen et al., 2018). Aryeetey et al (2016) observed that in Ghana, health insurance reduced the probability of a household incurring catastrophic cost as a result of health care expenditure by 13%. Lagomarsino et al (2012) examined the percentage of live births attended by skilled personnel as a proxy measure of the services delivered under various Social Health Insurance Schemes. It found that in Nigeria, Mali and Kenya, less than 50% of their female population are receiving skilled help at birth, whiles Ghana, Rwanda, India and the Philippines had 50-60% of skilled attendance with Indonesia and Vietnam at 75% and 88% respectively. They attributed the

increase to the presence of a Social Health Insurance Scheme. Despite the advantages of health insurance and insurance generally, issues of moral hazard and adverse selection, as well as other limitations of insurance are also documented (van Wiessen et al, 2016). Literature is however inconclusive on the positive effect of health insurance on health care utilization and reduction in out-of-pocket expenditure (Okoroh et al., 2018). Some of these studies have even suggested that health insurance uptake could actually lead to an increase in household expenditure on health.

The benefit of taking an insurance cover can however be said to outweigh the challenges associated with it and therefore makes sense that people would want to get insured in other to enjoy "free" health care when the need arises. In reality though, several issues mediate the decision to participate in or pay for a health insurance cover. These risks could either facilitate or hinder the decision to subscribe and pay for health insurance.

2.5.1 Determinants of Willingness to Participate and Pay for Health Insurance

Numerous studies have documented WTP for Health insurance (Gidey et al., 2019; Ogundeji, 2019; Jofre-Bonet & Kamara, 2018; Nostratnejad et al., 2016; Entele & Emodi, 2016). Known determinants of WTP include age, educational status, income, gender, occupation type, household size and location. These determinants have been grouped into five main categories by Nostratnejad et al (2016), namely: demographic, socio-economic, health service, perceived needs and insurance related determinants.

Gender was found to have an effect on Willingness to participate and pay for health insurance (Usman & Bukola, 2013; Onwejekwe et al., 2010). Onwejekwe et al (2010), in their study of WTP for community-based health insurance in Nigeria reported that men have a higher WTP than women. This was attributed to the difference in economic status of men and women. According to the study, men earn more than women and so are likely to wield more economic

power. Similar findings are observed by Usman and Bukola (2013) who concluded that male households were willing to pay because this is Africa where most men are the bread winners of their families and so expected to make such decisions whiles female headed households were likely to be headed by a widowed woman who may also be poorer. Age is another significant variable that has an effect on WTP (Gidey et al., 2019). It is assumed that older people may have more health problems and be at higher risk of falling ill and so likely to be more willing to pay (Adams et al, 2015). Studies by Entele and Emodi (2016) in Ethiopia and Salameh et al (2015) found that older persons were willing to pay more for health insurance. This they attributed to the perceived need for protection against old age-related health issues. However, increasing age has been mostly found in the literature to correlate with a lower willingness to pay (Jofre-Bonet & Kamara, 2018; Nostratnejad et al., 2018 and Usman & Bukola, 2013). Scheil-Adlung and Bonan (2013) argued that older people may have a lower capacity to pay for health insurance or may feel that they can depend on their children to take care of their health care needs in the event of an illness. Marital status in the literature significantly correlates with willingness to pay. Those who are married are more likely to have a higher WTP than those who are single, divorced, or widowed (Jofre-Bonet & Kamara, 2018; Usman & Bukola, 2013). Usman and Bukola's (2013) study on WTP for community-based health financing schemes in Nigeria found that marital status has a positive influence on behavior towards health services. This is attributed to higher household income between couples (Al-Hanawi et al., 2018). However, Nostratnejad et al (2018) and Adams et al (2015) did not find any significant relationship between marital status and WTP. Household size was also found to consistently correlate with higher WTP by Nastratnejad et al (2018). Nastratnejad et al (2018) in a systematic review of WTP for health insurance in Low- and Middle-Income countries, revealed that an increase in family size means that a substantial amount of the family's resources is spent on health care provision. Similar reports were

gathered in Nigeria (Babatunde et al., 2012), Ethiopia (Minyihun et al., 2019) and Cameroon (Cheno, 2021) where larger households were willing to pay more for health insurance. In contrast, Adams et al (2015) did not find any significant relationship between household size and WTP.

Education has been reported to significantly affect willingness to participate and pay for health insurance by Jofre-Bonet and Kamara, (2018) in Sierra Leone and Onwujekwe (2010) in Nigeria. They argued that a higher level of education was associated with higher willingness to participate and pay because the more knowledgeable or exposed a person is, the more likely they are to understand the value of health insurance and have a better health seeking behavior (Kado et al., 2020). Higher education is also associated with a better paid job and therefore higher income (Azhar et al., 2018). However, studies by Ogundeji et al (2019), Ahmed et al (2016) and Ghosh (2013) found contradicting results where individuals with higher education were less willing to pay for health insurance. They argued that individuals with higher education were in a better position to appraise other options or aspects of the benefit package and conclude that it may not meet their health care needs in the long run.

The relationship between place of residence and WTP has been consistent. Urban dwellers are more willing to participate and to pay higher amounts for health insurance when compared to those from rural areas. Miti et al (2020) suggests that the rural-urban differences could be attributed to socio-economic status of people. Ogundeji et al (2019) argues that urban dwellers earn higher incomes than their rural counterparts who depend mostly on subsistence livelihoods and petty trading (Ogundeji et al., 2019). Also, the level of education and knowledge of those in the rural areas and low-income areas tends to be lower which may also affect their understanding of health insurance and thereby translate into a lower WTP

(Ogundeji et al., 2019). Al-Hanawi et al (2018) also added that urban areas had better access to more advanced health care at all levels including specialist care as compared to rural areas. Other factors such as inadequate access to information by rural residents on health insurance could also affect their WTP for health insurance (Miti et al., 2020). Similar studies by Kalyango et al (2021) on willingness to pay for health insurance in Kampala city found that households from nun-slum areas were willing to pay more than those from slum areas. Contradictory findings are reported by Usman and Bukola (2013) who reported that rural households were more willing to pay for health insurance than urban households. She asserted that people in rural areas especially may have a higher WTP if the payment of health insurance was in kind and not in cash. Nosratnejad et al's (2018) review of WTP in LMIC's showed that literature was inconclusive on the effect of place of residence on WTP for health insurance.

Income levels consistently correlates with willingness to pay (Asenso-Okyere et al, 1997; Cheno et al., 2021; Jofre-Bonet & Kamara, 2018; Nostratnejad et al., 2016 and Adams et al., 2015). Households that earned more income are more likely to be willing to pay than households that earn less. Nostranejad et al (2016) reported that an increase in household income increased WTP by increasing the demand and purchase of health insurance. Entele & Emodi (2016) however found that though WTP increased with increasing farm income, an increase in livestock size reduced WTP. They argued that respondents were using an increase in livestock size as a backup or source of finance in case of any health challenges. Kado et al (2020) also found that lower income households are more willing to pay more than high income households. They attributed this to the recognition by poor households of their inability to pay out of pocket in the event of illness.

Occupation is another variable that has a significant relationship with WTP (Kado et al., (2020); Ogundeji et al., 2019; Jofre-Bonet & Kamara (2018); Nostratnejad et al., 2016). Ogundeji et al (2019) found WTP in the informal sector was low, arguing that though majority of the population could be found in the informal sector dependance was high among that segment of the population, which puts financial pressure on them and thereby affecting the WTP. Adams et al (2015) also argues that formal sector workers may be higher income earners thus influencing their WTP. They further found that those who were employed were more willing than those who were unemployed or retired. Jofre-Bonet and Kamara (2018) also found that farming as an occupation was likely to decrease WTP when compared to petty trading. Kado et al (2020) confirms these findings.

Other factors related to health service delivery, perceived health needs and insurance related variables have been observed to influence WTP for health insurance. Health services determinants such as the distance to the nearest health facility affects WTP. Kado et al (2020) found that households that reported a walking distance of 30 or less minutes to the nearest health facility reported a higher WTP than those who had to walk for 30 or more minutes. This, they concluded, is because proximity of health facility has an effect on the health seeking behavior of people. The closer the facility the more likely to use it in times of illness. A study in Nigeria showed that a unit increase in distance to a health center reduced WTP by 11% showing that people prefer to access health care close to them (Usman & Bukola, 2013). Past experience of hospitalization, perceived poor health status and past health care expenditure are perceived needs determinants that affect WTP. Minyihun et al (2019) found that households that had a member experiencing ill-health in the last three months prior to the study had a significant positive WTP. This they explained could be due to their risk averse nature. Miti et al's (2020) review of the factors associated with WTP for health insurance and

pension scheme among informal workers in LMIC's confirms past experience of illness as a positive determinant of WTP for health insurance.

Roth et al (2007) as cited in Ahmed et al (2016), reported that lack of knowledge on the importance of health insurance reduced WTP. The affordability, simplicity, value of health insurance, enrolment options and procedure all affected WTP (Ahmed et al., 2016). Having private health insurance is also a variable that has been found to influence WTP positively. Adams et al (2016) attributed this to the fact that such people have already been exposed to the idea of insurance and so understand its relevance and how it works. Similar results were observed in Nostratnejad et al (2016). They argued that when the idea of insurance is unclear, people are likely to report a low WTP. Contradictory results were however found in a study by Al-Hanawi et al (2018) in Saudi Arabia where households with a private health insurance cover were less WTP for public health insurance (Al-Hanawi et al., 2018). Tundui and Macha (2014) observed that trust was an important part of WTP. People do not trust insurance companies. They asserted that trust could be developed if insurance companies delivered the services agreed on in the contract presented to clients.

The literature reviewed above shows that most of the studies on WTP for health insurance especially in Africa have concentrated on the socio-economic and demographic characteristics of households such as age, education, income among others. As discussed earlier under the theoretical framework, there are other models that can help explain better the willingness of people to pay for health insurance. Though the determinants above help to understand households WTP for health insurance, they do not take cognizance of the socio-psychological factors that underly WTP. These socio-psychological factors challenge the assumption of the neoclassical theory that people are only motivated to pay for health insurance by their personal interest and budget constraints. WTP may be influenced by an

individual's attitude towards a particular behavior and the social norms that they accede to. The socio-psychological factors are not well explored or understood in relation to its effect on WTP for health insurance especially in Africa.

2.5.2 Determinants of Household's behavioral intention towards health insurance

Attitude, perceived behavioral control and subjective norms are none-economic factors that strongly determine the behavioral intention of people towards health insurance (Brahmana et al., 2018). A person's attitude towards health insurance could be positive or negative (Tam, 2021). A positive attitude towards insurance according to Rocha and Botelho (2018) increases WTP. People with a positive attitude generally feel that health insurance can take care of their health care needs thus increasing the likelihood of being willing to pay (Dzulkipli et al., 2017). Dzulkipli et al (2017), in their application of the theory of planned behavior to the intention to purchase medical and health insurance, found that attitude was one of the main factors that influences the intention to purchase health insurance.

Jembere (2018) in a study of the attitude of rural households towards community-based health insurance in Ethiopia, found that attitude towards health insurance was generally favorable. Socio-economic factors such as high level of education and large household size positively influenced attitude towards health insurance. Tam et al (2021) in examining the determinants of attitude and intention towards private health insurance in Australia reported trust and perceived value in insurance companies as significant factors that affect the attitude towards health insurance. Brahmana et al (2018) also reported that perceived risk and usefulness of health insurance played a role in attitude towards intention to purchase health insurance. If a person thinks that health insurance is useful and can protect them from uncertainty of when they will be ill and the uncertain cost associated with the illness, they are motivated to insure. Liebenberg et al (2012) found similar results to Brahmana et al (2018)

showing that perceived risk influenced the attitude of people towards purchasing health insurance.

Lack of trust and low awareness of the scheme leads to unfavorable attitudes towards health insurance (Tam et al., 2021; Jembere, 2018). Rocha and Botelho (2018) found a direct relationship between trust and attitude towards insurance. They reported that, a lack of trust can emanate from the difficulty in understanding complex contracts, lack of regulation and the difficulty in comparing insurance packages. People are uncertain over whether health insurers will deliver the services promised in the contract or not and this affects their attitude towards health insurance. This, according to Banerjee et al (2014), is common with public and micro-health insurance schemes in low-income settings. Other studies like Baillon et al (2019) in the Philippines confirm these findings. Past experience and health consciousness also increases intention to enroll on a health insurance scheme (Tam et al., 2021; Jembere, 2018). Negative past experiences are usually as a result of ill-treatment from health professionals and low quality of services provided (Baillon et al., 2019; Cernmauskas et al., 2018). Females show a higher intention to enroll than men (Tam et al., 2021).

The decision to purchase health insurance is influenced by other people we are socially connected to. This forms a subjective norm that influences people towards a certain health insurance behavior. Brahmana et al (2018) categorizes these social influences into internal and external. Internal influences are influences in decision making that comes from one's family or spouse whiles external influences emanate from the media, friends or the work environment of a person. Shet et al (2019) in their study on the awareness and attitude regarding health insurance among insured and non-insured in Uttar Kannada and Udipi districts found that, the main source of information on health insurance was health workers, family and friends and the media. Similar results were observed by Cai et al (2015) in an

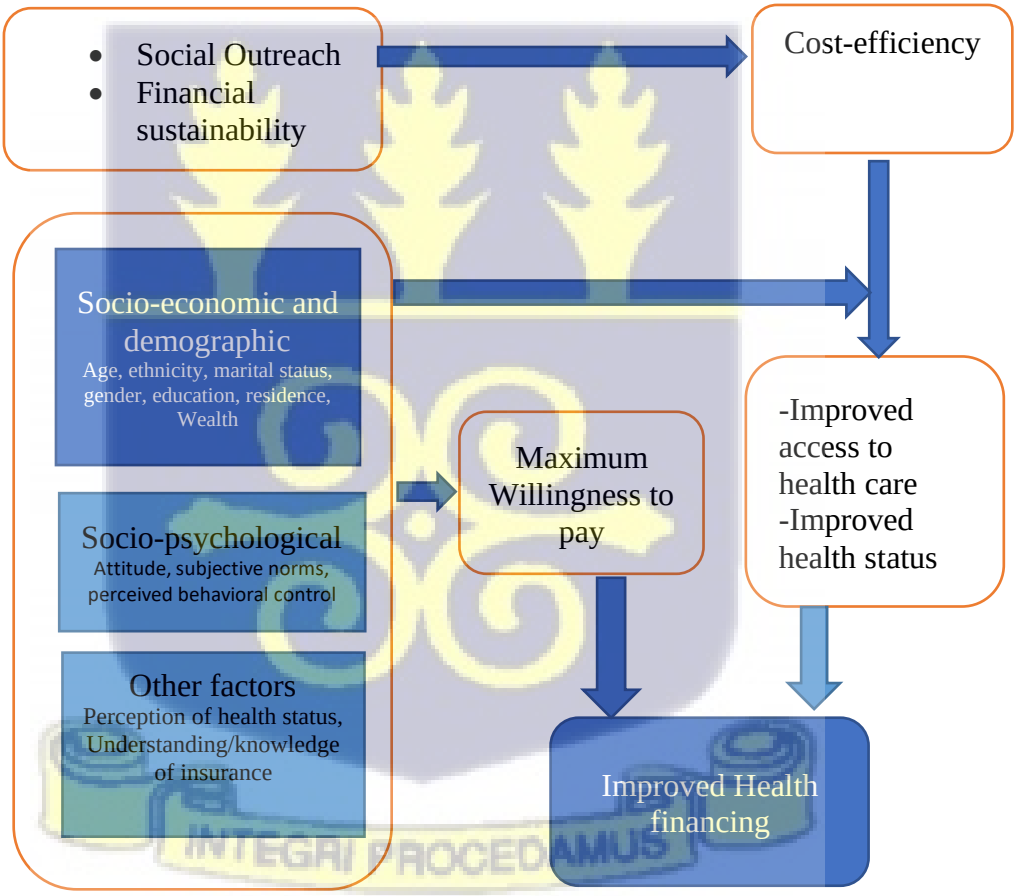
experiment where people were assigned to intensive or simple training on the importance of health insurance. The study found that people who had friends who took part in the intensive training were more likely to be more informed about the insurance product and to buy it even though they did not know the decision their friends took. They concluded that increased knowledge through peers increased uptake. Brahmana et al (2018) suggested that insurance companies should consider offering family packages, engage celebrities to campaign and also use the media to educate the public about the importance of health insurance in order to positively influence WTP. In relation to the factors that influence the perceived behavioral control, Brahmana et al (2018) found that thoughts about price and financial ability influences the intention to purchase health insurance. Other factors such as the perceived complexity of acquiring health insurance, the availability of information and regulation literacy were also reported to influence the intention to purchase health insurance. This is confirmed by results from Liebenberg et al (2012).

Though several studies have used economic models like the Expected Utility Theory to discuss the determinants of health insurance behavior, economic theories have been limited in explaining the low demand of health insurance among low-income groups (Platteu et al., 2017). Behavioral theories such as the theory of planned behavior provides more insight on this irrationality. This study aims to bridge this gap by applying the theory of planned behavior variables with the socio-economic and demographic factors to provide more insight on health insurance behavior in Ghana. This is to help us fully understand the determinants of WTP for health insurance through MFIs in Ghana. Understanding the behavior of people towards health insurance is important in ensuring full participation of people in the health insurance scheme, as well as, retention.

2.6 Conceptual Framework

The framework in figure 2.1 helps us understand the role of microfinance institutions in improving health financing by facilitating access to health insurance among people in the informal sector. Every health financing system is to collect revenue by pooling resources to purchase the required health care for its citizens (Kutzin, Cashin & Jacab, 2010). While it is government's role to collect revenue for the public health sector, this role can be played in partnership with the private sector, and in this case, the MFIs.

Figure 2.1: Determinants of Willingness to Pay for health insurance through MFIs and their effect on improved health financing.



Source: Author, 2020

The main argument of this conceptual framework is that MFIs are expected to achieve both social and financial goals. They are expected to achieve financial goals because just like

banks, they need to stay in business and social goals because Microfinance is seen as a tool for poverty alleviation and the improvement of the welfare of poor populations. Though there are concerns of a possible trade-off between social and financial goals, both seem to reinforce each other. By serving people from different socio-economic backgrounds, MFIs are able to not only absorb shocks, but they are also able to diversify their portfolio and the range of services provided. Also, the high cost of reaching poor clients is cross-subsidized by serving wealthier clients. The consequent effect may be to have an increased clientele base which may drive down the cost of transaction because of economies of scale. This cost efficiency, accompanied with reduced transactional costs increases outreach to excluded populations. Improved outreach means that disadvantaged populations are empowered socially, economically and politically thereby improving the welfare of client households. Using a cost-efficient strategy like MFIs to reach underserved populations will therefore improve access to health care and reduce health risks by allowing households to save and borrow at their convenience towards health insurance. The consequent effect is an increase in health financing through an increase in premium payments. The ability of MFIs to play this facilitating role may also be intermediated by client characteristics.

Socio-psychological, socio-economic and demographic, as well as other health related factors all influence willingness to pay for health insurance. Socio-psychological factors include attitude, subjective norms and perceived behavioral control. A household with a positive attitude towards insurance is likely to be well informed about health insurance and its value to the overall wellbeing of the household. This positive attitude will make them more willing to participate and pay more for health insurance. Subjective norm, affects health insurance decision when the perception of our peers, community leaders, family and close associates influence what we perceive as right or wrong health insurance behavior. Such influence usually happens where there is a strong social cohesion. With regards to perceived

behavioral control, the level of ease or difficulty with which we access health insurance affects our willingness to participate and pay for health insurance. Lack of access, opportunities or even information can affect our health insurance behavior.

From figure 2.1, socio-demographic factors such as age, level of education, wealth, occupation, marital status among others, influences people's perception of health insurance. This affects their willingness to pay. For instance, people with higher education and those in the formal sector may be more inclined to taking a health insurance cover and willing to pay higher amounts for it because they may understand insurance information and appreciate how it works. Other health related factors such as the perception of a person's health status compared to their peers and their understanding and knowledge of health insurance schemes also affects WTP. A person who perceives his/her health status to be better than that of their peers may be unwilling to pay more for health insurance because they may feel they are healthy and so do not need it. The maximum amount households are WTP will impact their access to health care, improvements in their health status and health financing. For instance, if the amount they are WTP is high, it will increase the amount that government collects from premiums which will consequently increase health financing.

2.7 Microfinance as an alternative health-financing avenue for the poor

The Microfinance industry developed out of recognition of the challenges facing poorer populations in accessing formal banking services (CGAP, 2018). It started mainly in Bangladesh and parts of Latin America. The earliest modern day microfinance institutions were Grameen of Bangladesh, ACCION of Latin America and Self-Employed Women's Association (SEWA) in India. The popularity of microfinance in Asia and Latin America spread fast to Africa. The Microfinance methodology resonated with Africans, because they

were used to having informal self-help saving and loan arrangements centuries before Microfinance was introduced on the continent (Steel & Andah, 2003).

The development of a better understanding of the special financial and demographic needs of low-income groups such as their use of collateral substitutes, facilitated the success of Microfinance. Though Microfinance originally started by offering small savings and loans, their scope has expanded to include various other products like insurance, money transfers and mobile money. Microfinance is offered by different types of financial institutions such as commercial banks, rural banks, cooperate Unions, Non-Banking financial Institutions, NGO's and Microfinance Institutions.

A Microfinance Institution could be for profit or not for profit non-governmental organizations (NGOs). Funding for MFIs comes from both Multilateral and bilateral agencies. Despite the controversies, the Microfinance Industry according to World Vision (2020), supported about 139.9 million individuals with financial services worldwide in 2018. Out of this figure, more than half i.e., 57.8% are found in rural areas, making microfinance an effective tool in reaching poor households. This is through financial service strategies that improves their businesses leading to an improvement in their household financial security, education and healthcare (Leatherman et al., 2010; Ofori-Adjei, 2007). The strength of Microfinance is based on the assumption that poor people can also save and manage businesses to become viable ventures. To achieve their aim of banking the unbanked, Microfinance institutions devised a system of getting as close to the client as possible whiles efficiently using their limited resources. The methodology of serving clients at their doorstep has facilitated their reach of the poor and underserved in the informal sector (Meghan, 2010).

Whiles playing its role of alleviating poverty, the positive impact of Microfinance Institutions on the behavior of their clients has also been noted. As a result, they are increasingly being used as an avenue to provide auxiliary services to their clients (Ofori-Adjei, 2007). Such auxiliary services include HIV education, reproductive and maternal health education, personal hygiene among others. Health education is usually delivered during routine Client/loan officer engagements, and has been found to improve knowledge and lead to positive behavioral change (Leatherman & Dunford, 2010). De La Cruz et al, 2009 in their randomized experiment of offering either malaria education or diarrhea education to clients of a Microfinance institution in Ghana, found that, clients who received education in malaria exhibited significant knowledge on several knowledge indicators than the control group and were more likely to own a mosquito net.

CRECER, an MFI, set aside a day known as health days when they visit communities with a health team. During such visits, the clients could get access to primary as well as diagnostic health care service at a small fee. These health days were seen as an important way of improving access to healthcare since about 24% of the clients who use such facilities had never been to a health practitioner before (Banerjee, Duflo & Hornbeck, 2014). McHugh, Biosca and Donaldson (2017) portray the impact of microfinance on health in three levels: the individual, where the socio-economic factors that affect the health of the individual is influenced to affect their perception and experience. At community level and societal levels, they influence societal cohesion, social capital and social networks influencing final health outcomes.

Despite the positive impact of such auxiliary health services on the poor, health financing continues to present challenges to the poor clients. Ill health is one of the most cited reasons for clients defaulting or dropping out of a scheme (Reinsch et al., 2011). Recognizing the

negative effects of ill health on the financial performance of their clients, some microfinance institutions are offering health related savings and loans products whiles some have linked up with providers of health services and products (Leatherman et al., 2011). Through these collaborations, the health of clients is improved thereby impacting their ability to work hard to repay loans and make savings. The decision to expand an MFI's operations to include health is usually based on the social mission of improving the lives of their clients (Leatherman et al., 2012).

The MFI facilitated alternative health financing schemes are different from health insurance schemes, in that, they are more interested in protecting their clients from impoverishment caused by high out of pocket health expenditure and their portfolios (Ofori-Adjei, 2007). The bundling of Microfinance products with insurance has been suggested as a good way of improving insurance uptake (ILO, 2013 as cited in Banerjee et al., 2014). MFIs could serve as agents for a larger insurance company or give out insurance on their own (Banerjee et al., 2014). The health financing options that MFI's present in the form of health savings and health loans, is likely to bring down the cost of premiums to levels that they can afford and pay without difficulty (Meghan, 2010). Leatherman et al (2010) reports that the majority of MFI's that offer micro-insurance schemes provide it for hospitalization only. But there is the need to expand beyond this to cover drugs, in-patient services for instance which can also take up substantial household expenditure (Banerjee et al., 2014).

The ability of MFIs to reach out to a wide segment of the population and the close relationship developed between them and their communities of operation and clients gives them leverage in promoting insurance uptake just like they have been able to achieve with health education (Grey, 2015; Meghan, 2010). Clients value the close relationship developed with MFI's and have a lot of trust in their loan officers. As a result, they are likely to take up

any recommendation given them by the loan officer. An MFI facilitated health insurance scheme will not only break the barrier of access but also ensure the sustainability of the scheme (Ofori-Adjei, 2007). It provides a dynamic, extensive and reliable access to healthcare for a population that has been neglected for too long (Metcalf et al., 2014).

Micro-insurance, according to Meghan (2010), can make use of the "social capital" that can be found in small and rural communities in order to make the idea of insurance acceptable. This is because the idea of paying an upfront fee for a service that has not been enjoyed yet is not a very common concept and unlikely to be accepted (Dror et al., 2007 as cited in Meghan, 2010). The bundling of Microfinance and insurance should however not be seen as a magic bullet. Studies have found that bundling of microfinance and health insurance under the assumption that people will take the service because they need the finance is not always true.

Banerjee, Duflo and Hornbeck (2014) in their assessment of the effect of bundling health insurance and microfinance products in the randomized introduction of a health insurance program by SKS in India found that, clients were willing to let go of the financial service if it meant taking insurance as well. Micro-insurance according to Sinha and Batjiji (2010) as cited in Leatherman et al (2012) presents Microfinance institutions with a complexity that they struggle to design or implement. Leatherman et al (2012), therefore advice that the design and implementation of such schemes be carefully done in order to maximize its potential and value to reduce risk to the client.

2.7.1 Changes in the MFI sector and its impact on calls for efficiency

While MFIs continue to offer more and more tailored services to their clients and become more commercialized, some authors fear that MFIs may drift from their core mandate, which is to provide financial services to the poor and un-banked (Kono & Takahashi, 2010). This is a situation Cull et al (2009) terms "mission drift". Several factors have led to transformations

in the Microfinance sector. The first issue is the increase in MFIs the world over as a realization of the potential of the microfinance industry to impact economic growth. This has increased the competition in the sector leading to competitive interest rates, introduction of new range of services (savings accounts and micro insurance), lower cost of operation and efficiency (Rhyne & Otero, 2006 as cited in Bharti & Malik, 2022).

Secondly, Commercial Banks that were traditionally not interested in the un-banked are increasingly trying to engage this sub-group through microfinance (Rhyne & Otero, 2006 as cited in Bharti & Malik, 2022). This, increases competition from both within and outside the Microfinance industry. This according to Hermes et al (2011) is because MFI's have demonstrated that poor people can also save and make it a profitable business. An example is Ecobank in Ghana who in partnership with ACCION, set up a Microfinance department. This has put pressure on MFIs to become more efficient and to reduce their cost of lending and doing business.

Also, the interest of some multi-national banks and investors like the Deutsche Bank in the Microfinance sector of developing countries has increased (Hermes et al., 2011). This is because of the assumption that MFIs serve a double bottom-line. That is, they are not only interested in financial sustainability but also social performance (Bharti & Malik, 2022). Attracting investors who are more interested in the social performance of MFIs and so lend to them at low interest rates.

Furthermore, the adoption of technological innovations in Microfinance such as the use of ATMs, debit cards, POS devices among others has helped to not only improve the services offered but also reduce the cost of transactions (Hermes et al., 2011). Lastly, the recent regulation and liberalization of the Microfinance sector by most governments has led to the establishment of some guidelines and regulatory framework for the Microfinance sector

(Rhyne & Otero, 2006). These have led to the stability of the sector and also these guidelines have led to a push towards improvements in sustainability and efficiency of the Microfinance sector. What most of these factors seem to achieve is to make MFIs more commercialized.

As a result of these developments, focus has been directed on the effects of achieving sustainability and efficiency on the outreach of MFIs. Outreach is generally defined in the literature as the focus on providing financial services to the poor so that they can also earn a living (Abdulai & Tewari, 2016; Hermes et al, 2011). Providing small loans to the poor involves a higher cost, which has impact on the operation of MFIs but increases the depth of outreach (Abdulai & Tewari, 2016). Some studies have investigated the relationship between efficiency of MFI's and outreach. This is in recognition of the fact that the changes that the sector has experienced overtime has the ability to change their focus, outreach and performance (Georgioes, 2019, Kumar & Sensanar, 2017; Hermes et al., 2011). Adhikary and Papachristou (2014), in their analysis of the relation between financial performance and outreach of MFIs in South East Asia, found outreach to positively impact efficiency and profitability. Bharti and Malik (2022) in their evaluation of how social and financial outputs together affect efficiency of MFIs in India, concluded that, the efficiency of MFI's improved across various categories with the inclusion of social output or indicators. The study found no trade-off between efficiency and sustainability in that regard. The study also found that larger MFIs were more efficient contradicting Efendic and Hadziahmetovic (2017) who found that smaller MFIs were more efficient than larger ones.

Other studies like that of Hermes et al (2011) have shown that there is a trade-off between efficiency and depth of outreach. As MFIs become more efficient, they serve fewer poor clients. The study concludes that MFIs are likely to drift away from their mission once they strive to achieve efficiency. Some researchers have argued that the addition of social

performance indicators to the operation of MFIs will increase their cost of operation. Thus, reducing their level of efficiency (Morduch, 2000). Mersland and Strom (2010) contradict Hermes et al (2011) by suggesting that MFI's must rather strive for efficiency in order to be able to offer smaller loans because the inefficiency of an MFI could be passed on to the client in the form of larger average loan sizes. Cull et al (2009) for instance found that the MFIs that were more commercialized offered bigger loans and served wealthier clients. This contradicts the microfinance ideology of providing smaller loans to poorer people. It has therefore become unclear whom MFIs are really serving.

Armendariz and Szafarz (2009) also argues that MFI's offering larger loans may not be an indication that they have drifted from their mission, they may just be cross subsidizing in order to stay efficient and sustainable. The argument however rests on the idea that the poor cannot be served by MFIs in the long run if they are not efficient. All these studies point to the fact that efficiency is an important factor in the operations of MFIs. In this study, the cost efficiency of MFIs is being assessed to find out if they can serve as a platform for the provision of health insurance. If they are not efficient in their current state, they definitely cannot be used as an avenue to reach the people in the informal sector in a national policy like the NHIS.

2.7.2 Determinants of Cost efficiency in Microfinance

The ability to identify how efficient financial institutions are operating has challenged researchers over the years. The use of accounting variables such as cost per borrower, administrative expense ratio, number of loans per loan officer, were used to estimate efficiency ratios but they could not provide empirical drivers of these efficiencies (Johnes et al., 2017). Two methodologies are mainly used in the analysis of efficiency and these are the Data Envelopment Analysis (DEA), and the Stochastic Frontier Approach (SFA).

The SFA is a parametric approach where the MFI is assumed to only produce one output, which is used as the dependent variable of the estimated production function (Hermes et al., 2011). The SFA is restricted in the number of dependent variables it can take on and imposes a functional form on the dataset. However, it is able to test the significance of the efficiency estimates made (Kumar & Sensamar, 2017). Unlike the SFA, the DEA is a non-parametric measure that can take on more than one output but is unable to test the statistical significance of the efficiency estimates made.

The MFI efficiency debate has not settled on which approach is more robust and provides the best results or estimates because of the limitations associated with each approach. As a result, other variants of these approaches have been developed. For instance, Kumar and Sensamar's (2017) developed the Stochastic Distance Function Approach. It is targeted at minimizing the disadvantages of the DEA and SFA by allowing the incorporation of more than one output in the production function as well as testing for statistical significance.

With respect to efficiency in MFI's, researchers have used both outreach and productivity measures. Outreach is measured in terms of the average loan size, number of borrowers, number of female borrowers among others (Abdulai and Tewari, 2017). Whiles the measurement of performance indicators include number of clients per staff and number of borrowers per loan officer (Oteng-Abayie et al., 2011). Several studies in Microfinance have revealed the determinants of efficiency in the sector. Much of what pertains in the sector can be drawn from the mainstream-banking sector. The type of MFI being operated, that is, whether regulated or non-regulated, co-operative or non-governmental, deposit taking or non-deposit taking, has been found to influence efficiency.

Mersland and Strom (2010) in their study on mission drift in MFI's found that, the Non-governmental MFI's and cooperative Unions are more efficient than Banks because of their use of the group lending methodology which removes information asymmetry. Similarly, Abdulai and Tewari, (2016) found that semi-formal MFIs are not as efficient as formal MFI's. Hassan and Sanchez (2009) report similar results in their studies. Haq, Skully and Pathan (2010) equally found that Microfinance NGOs are more efficient than banks in relation to maximizing the returns of input into output. While Banks are more efficient in mediation of funds when it comes to borrowers and savers.

Oteng-Abayie et al (2011) in Ghana, who, used the SFA to investigate the economic efficiency of 135 MFI's, found an average efficiency of 56.21% with management practices and technical competencies as the major cause of inefficiency in the MFI sector. Specifically, the study found age, savings indicators of outreach and productivity as well as the cost per borrower as significant determinants of an MFIs economic efficiency. Similar studies by Singh et al (2013) using Tobin's regression model and correlation found that location, total asset and borrower per staff were found to significantly determine technical efficiency. Pal's (2010) study on the Microfinance industry in India showed that age, borrower per staff, total asset, Operational self-efficiency, return on equity, return on asset and return on gross loan portfolio have a positive effect on technical efficiency of MFIs.

Georgios (2019) used the Data Envelopment Analysis approach to evaluate the efficiency of MFIs across countries and found an average efficiency of about 85%. The study found that the small number of MFIs that achieved efficiency of below 50% could easily become 100% efficient by simply changing some inputs-outputs. Kumar and Sensarma (2017) in their study of the efficiency of Microfinance Institutions in India using the Stochastic distance function approach found that there are significant effects of inefficiency in the Microfinance industry

however; efficiency seems to be improving overtime. Also, average loan balance per woman borrower and number of women borrowers reduces inefficiency. Similar studies in Sub-Saharan Africa by Abdulai and Tewari (2016) found that average loan balance, operating expense ratio, total asset, borrower per staff member and percentage of female borrowers determine efficiency.

The measurement of the efficiency of MFIs is usually done with financial indicators at the neglect of social indicators despite MFIs dual bottom-line (Bharti & Malik, 2022). This is because they deem financial performance more important than social performance. Bharti and Malik (2022) argue that to fully measure the efficiency of an MFI, it is important to combine both financial and social indicators. Though several studies have established a negative effect of social performance on efficiency, others like Bharti and Malik (2022), found otherwise. Some others did not find any relationship between social performance and financial sustainability (Lebovics et al, 2016). For instance, Louis et al (2013) in their study of 650 MFIs from 88 countries concluded that, social performance does not affect efficiency.

CHAPTER THREE

STUDY AREA AND METHODOLOGY

3.1 Introduction

This chapter presents the profile of the study areas and the methodology employed. The first part of the chapter examines the localities where the study was conducted by presenting the profiles of the districts. The second part of the chapter then presents the methodology employed in answering the research question. It includes the sampling procedure, method of data collection and analysis.

3.2 The Study Areas

The study was conducted in the Greater Accra and Northern regions of Ghana. Two districts were chosen from each region, one urban and one rural. The selection of the regions and districts was based on Ghana's geography, poverty map and urban and rural hierarchy. The country was divided into two ecological zones, that is, the northern and southern zones. The poverty map of Ghana was then used to select the two regions (Cooke, Hague & McKay, 2016; GSS, 2015). The poverty map catalogues the trends in terms of depth, breadth and incidence of poverty across the country. Since this study is very interested in reducing health risk especially among the poor, the map helped to identify where the poor are located in order not to oversample from areas that may be less poor. The Northern region was selected because it recorded the highest number of poor people in the country whiles Greater Accra on the hand has the lowest number of poor people in Ghana (Cooke et al., 2016).

Though poverty in the southern zone is perceived to be less endemic than the northern zone, the rural urban dynamics may also affect how households experience poverty. This made it important to take the rural/urban dynamics into consideration. Households in rural areas have a much higher poverty rate than urban households (Cooke et al., 2016). The urban districts

and rural districts in each region were listed. With this frame, one district was randomly selected from each category. These are the Tamale Metropolitan, La-Dadekotopon Municipal, Shai-Osudoku district and West Mamprusi district assemblies (at the time of selection, West Mamprusi was still part of Northern region). The selection of households from rural and urban assemblies from different ecological zones would not only give spatial representativeness but also provide a proper representation of households from different socio-economic backgrounds in the country. This method of selection would therefore offer a basis for comparing responses across socio-economic groups and geographical locations in Ghana.

Tamale Metropolis is located in the Northern region of Ghana. It is a medium sized city and serves as the largest city in the eight northern regions of Ghana. It also serves as the administrative capital of the northern region housing most of the ministries and agencies in the Northern region. It is one of the fastest growing economies in Ghana with annual growth rate of 3.3% (Gyasi et al., 2013). About 81% of the inhabitants can be found in the private informal sector (GSS, 2014b). The Metropolis can boast of a teaching hospital and several other government and private hospitals making physical access to health care in the municipality easier than other parts of the region.

West Mamprusi is also located in the North East region of Ghana. It is a predominantly rural district with Walewale as its administrative capital. Urbanization is centered in and around Walewale and that is also where most social amenities are located. The district can boast of only one district hospital. Other sources of health care provision include polyclinics, health centres, clinics and CHPS compounds. The economy is predominantly agrarian with sparsely occupied lands. The sparse settlements and bad road network have implications on access to health care services (GSS, 2014d).

La-Dadekotopong is one of the urban areas of the greater Accra region. It was created in 2012 with its capital at La. The municipality covers an area of 360sq km and is entirely urban (GSS, 2014a). The private informal sector employs about 60.7% of the inhabitants of the area (GSS, 2014a). The central location of the municipalities gives it easy access to other urban districts and social amenities in the Greater Accra region. The Municipality can boast of tertiary level health centers like the 37-military hospital.

The Shai-Osudoku is one of the predominantly rural districts in the Greater Accra region with a rural population of about 76.7% (GSS, 2014c). It has Dodowa as the administrative and political capital. 80.6% of the population is engaged in the private –informal sector with agriculture as the main economic activity. The district has one district hospital in Dodowa with other health centres and CHPS compounds dotted in other parts of the district. The proximity of the district to other urban districts in the Greater Accra region gives it easy access to higher-level health facilities in other parts of the region. This accessibility to health facilities has implications for health seeking behaviors.

3.3 Profile of La-Dadekotopon

The Municipality covers an area of 36,033 square kilometres and shares boundaries with Accra Metropolitan to the west, to the east with Ledzokuku Municipal, to the north with La-Nkwantanang-Madina Municipal and to the south with the Gulf of Guinea (GSS, 2014a). See figure 4.1.

3.3.1 Population

According to the 2010 Population and Housing Census, the population of the district is 183,528 with more females (52.7%) than males (47.3%) (GSS, 2010). The Municipality is entirely urban (100%) and has a youthful population with a dependency ratio of 50.1% (GSS, 2014a).

3.3.2 Social Organization

The main ethnic group of the area is Ga-Adangbe. The dominant indigenous language spoken is Ga and it is a patrilineal society. However, other ethnic groups can be found in the Municipality due to the warm hospitality of the indigenes and extensive economic activities in the area. The people of La are historically believed to have migrated from Bone in Nigeria to their present location. La-mei (the natives) came with and have continued to practice their own religious beliefs under the deity "La-Kpa". Homowo is the annual festival celebrated by the people of La and usually happens in August. The main native food of the people is kenkey, fish and pepper (komi ke shito). The La Mantse is the paramount chief of the La Traditional Area and is assisted by eight clan sub-chiefs in the traditional administration of the area. There are 77 family houses that fall under the umbrella of eight clan houses, headed by sub chiefs who represent their people in the traditional council. These sub-chiefs also assist the paramount chief in the traditional administration of the Municipality.

3.3.3 Economic Activities

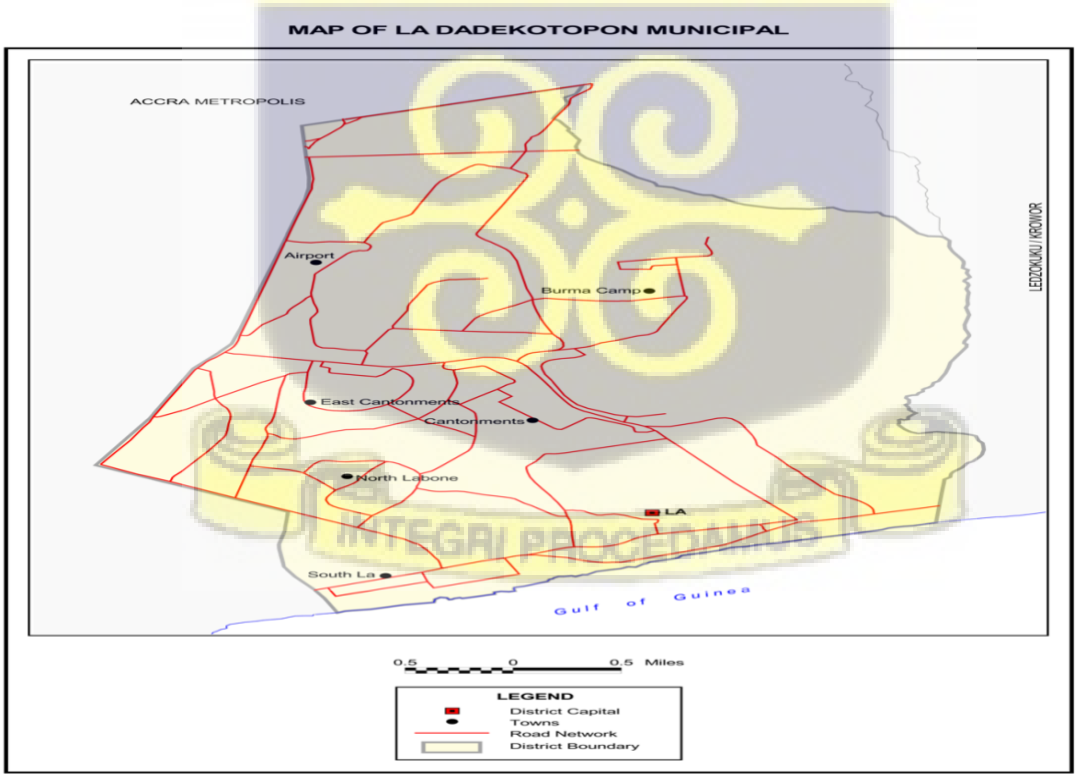
About 70 percent of the population aged 15 years and older are economically active while 29.7percent are economically not active (GSS, 2014a). Of the economically active population, 91.4 percent are employed while 8.6 percent are unemployed (GSS, 2014a). The Gulf of Guinea and the Kpeshie Lagoon provides an avenue for fishing for the indigenous people even though the Kpeshie Lagoon is filled with debris in recent years. Consequently, the main economic activity for the men is operating the public transport system popularly known as trotro business while majority of the women are into petty trading in smaller kiosks and containers as well as hawking. About 60 percent of the population of La Dadekotopon are self-employed and are mostly engaged in food vending, mechanical works, hairdressing, tailoring and carpentry (GSS, 2014a). The municipality houses most of the shopping malls found in the Capital city such as the Accra Shopping Mall, Koala Shopping Mall and Marina

Mall. It also houses luxurious hotels, several financial institutions, the Kotoka International Airport and the Ghana International Trade Fair Centre. These institutions undoubtedly provide employment for the people.

3.3.4 Health care

The La General Hospital is the main government health facility in the municipality (LaDMA, 2019). The municipality can boast of two quasi government health facilities as well as 16 private health facilities and 8 CHPS compounds (LaDMA, 2019). The two quasi-government facilities also serve as referral centres for facilities both within and outside the municipality. Communicable disease forms the major health challenge for the people in the municipality mainly because of poor sanitation and poverty. Malaria is the highest cause of out-patient cases, recording about 40,098 cases in 2017 alone (LaDMA, 2019). Endemic seasonal outbreak of cholera is also a public health challenge for the Municipality (LaDMA, 2019).

Figure 3.1: Map of La-Dadekotopon Municipality



Source: Ghana Statistical Service, District Analytical Reports, 2014a

3.4 Profile of Shai-Osudoku District

The Shai-Osudoku District occupies a total land area of about 968.361 square km (GSS, 2014c). The district has Dodowa as its capital. The district was carved out of the Dangbe West District in 2012 with Ningo Prampram District. The Shai-Osudoku District is largely rural. It shares boundaries with the North Tongu District to the North-East, Yilo and Lower Manya Districts to the North-West, Akwapim North District to the West, Kpone Kantamanso District to the South-west, Ningo Prampram District to the South and the Ada West District to the East (figure 4.2). The Volta River washes the North-Eastern portions of the district.

3.4.1 Population

The population of Shai-Osudoku District according to the 2010 Population and Housing Census is 51,913 and of this 48.7 percent are males and 51.3 percent are females (GSS, 2014c). The district's population constitutes 1.3 percent of the region's population. Also, about 76.7 percent of the district's population resides in rural communities (GSS, 2014c). The district has a sex ratio of 95 and an age dependency ratio of 76.4 (GSS, 2014c).

3.4.2 Social Organization

Oral traditions have it that the Dangme's like the Ga's migrated from Nigeria. Whiles the Ga's moved by sea to their current location, the Dangbe's moved by land through Togo to their present homes. They are made up of four tribes i.e., Shai and Osudoku who remained in-land and Ningo, Ada and Gbugbla (Prampram) who moved further to the coast. The people predominantly speak Ga and Dangme. There are two traditional councils in this district. These are; Shai Traditional Area headquartered at Kordiabe and the Osudoku Traditional Area with the seat at Osuwem. Puberty rites are performed for both boys and girls. Fathers bought guns, gave them land to cultivate or fishing gear to go fishing and married for their sons whiles girls undertook the 'Dipo' rite which taught them home craft. The Shai and

Osudoku traditional areas celebrate 'Ngmayem and Dzehayem' in August and October respectively. Other celebrations for traditional fetishes take place yearly after the Easter celebration. The chief and 'Asafoatsemei' also observe yam festivals for their traditional stools every year. The various clans also observe funeral rites for the departed relations yearly.

3.4.3 Economic Activities

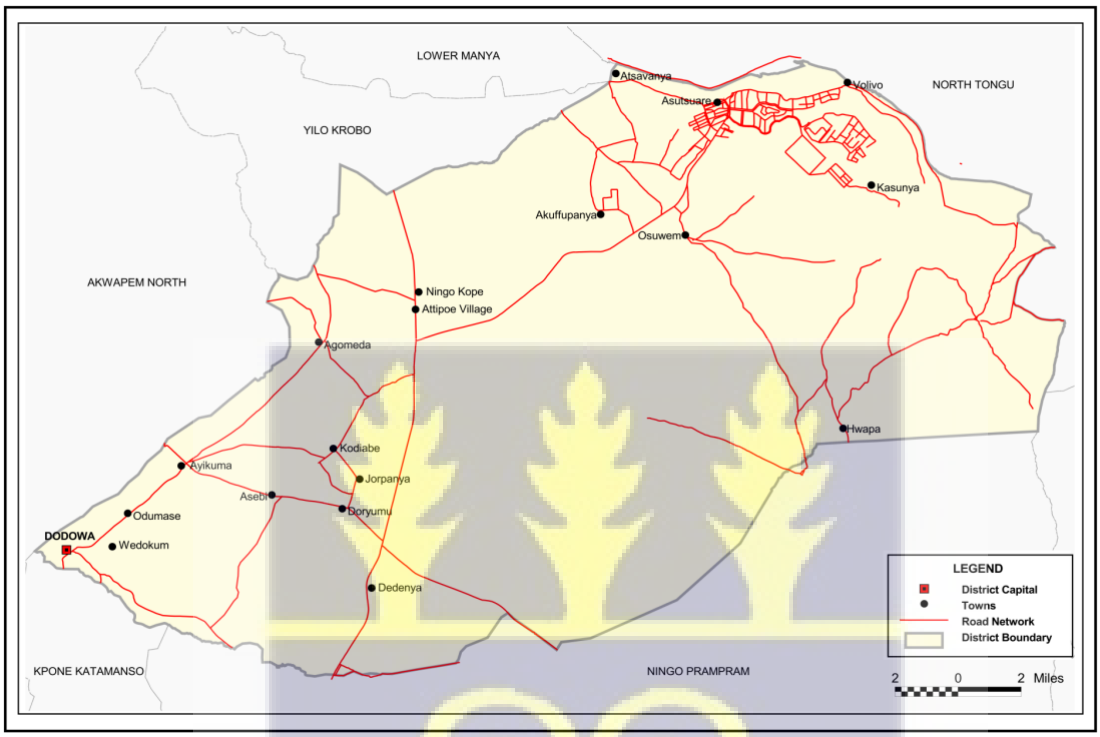
The district data shows that 69.2 percent of the population is economically active, with 72.8 percent representing males and 66.0 percent representing females. Again, 93.3 percent of the economically active population is employed with males (94.4%) and females (92.3%) (GSS, 2014c). Because of the predominance of rural settlements in the district, agriculture is the dominant occupation. The agricultural (crop/ livestock farming, and fisheries) sector of the district employs about 58.6 percent of the people in the district. Trading is the next largest employer, engaging 22.1 percent of the people (GSS, 2014c). The Shai-Osudoku District is noted for the production of fruits such as mangoes, pineapple, and banana but rice and aquaculture seem to dominate in the Asutsuare area. As the district lies within the Accra Plains it is also noted for animal production with cattle, goats and poultry rearing being the leading activities. A few commercial farms have been established in the district such as the Golden Exotic farms and the Tropo farms. Although agriculture dominates the district, the sector that gives more revenue to the District Assembly is quarrying.

3.4.4 Healthcare

Increased access to health care services is crucial in improving the health status of the people for increased productivity and output. To improve the health delivery system in the district, ten health facilities have been strategically established in the district to increase accessibility to health care facilities and services. These comprise one District Hospital located at

Dodowa, five CHPS Zones located at Agomeda, Ayikuma, Agortor, Osuwem and Tokpo respectively. There are also 2 Health Centres located at Osuwem and Asutsuare. The district also has one Private Maternity Home at Dodowa as well as a Quasi-Government Institution located at Kordiabe (GSS, 2014c).

Figure 3.2: District Map of Shai-Osudoku



Source: Ghana Statistical Service, District Analytical Reports, 2014c

3.5 Profile of Tamale Metropolitan

The Tamale Metropolitan Assembly was established by legislative instrument (LI 2068) and was elevated to a Metropolis in 2004. It is one of the six Metropolitan Assemblies in the country and the only Metropolis in the three Northern regions at the moment. The Tamale Metropolis shares boundaries with the Sagnarigu and Savulugu districts to the north, Tolon to the west, Mion District to the east, East Gonja to the south and Central Gonja to the south-west (TaMA, 2019). The Metropolis has a total estimated land size of 646.90180sqkm (GSS, 2014b). Geographically, the Metropolis lies between latitude 9º16 and 9º 34 North and

longitudes 0º 36 and 0º 57 West (GSS, 2014b). The central position of Tamale makes it a strategic area for the trading of goods and services from the surrounding districts, the rest of the Northern region and also other West African countries like Burkina Faso, Niger, Mali among others.

3.5.1 Population

The population of Tamale Metropolis, according to the 2010 Population and Housing Census, is 233,252 representing 9.4 percent of the region's population (GSS, 2010). Males constitute 49.7 percent and females represent 50.3 percent. The proportion of the population living in urban localities (80.8%) is higher than that living in rural localities (19.1%) of the metropolis (GSS, 2014b). The population of the metropolis is youthful with almost 36.4% of the population below 15 years.

3.5.2 Social Organization

Historically, the Northern Regions of the country had vast land cover with smaller population sizes and the Metropolis is of no exception. This area begun experiencing high population growth after many people with different ethnic backgrounds started migrating from other areas to settle there, thus making it a cosmopolitan area. The Dagombas form the largest ethnic group and other ethnic groups such as Gonjas, Mamprusis, Akan, Dagaabas and groups from the Upper East Region are also residing in the Metropolis. Also found in the Metropolis are other nationals from Africa and other countries across the globe. The area has two annual festivals; these are Damba, Bugum (fire festival) and the two Muslim Eid festivals (Eid Fitr and Eid Adha). Muslims followed by Christians, spiritualists and traditionalists dominate the Metropolis.

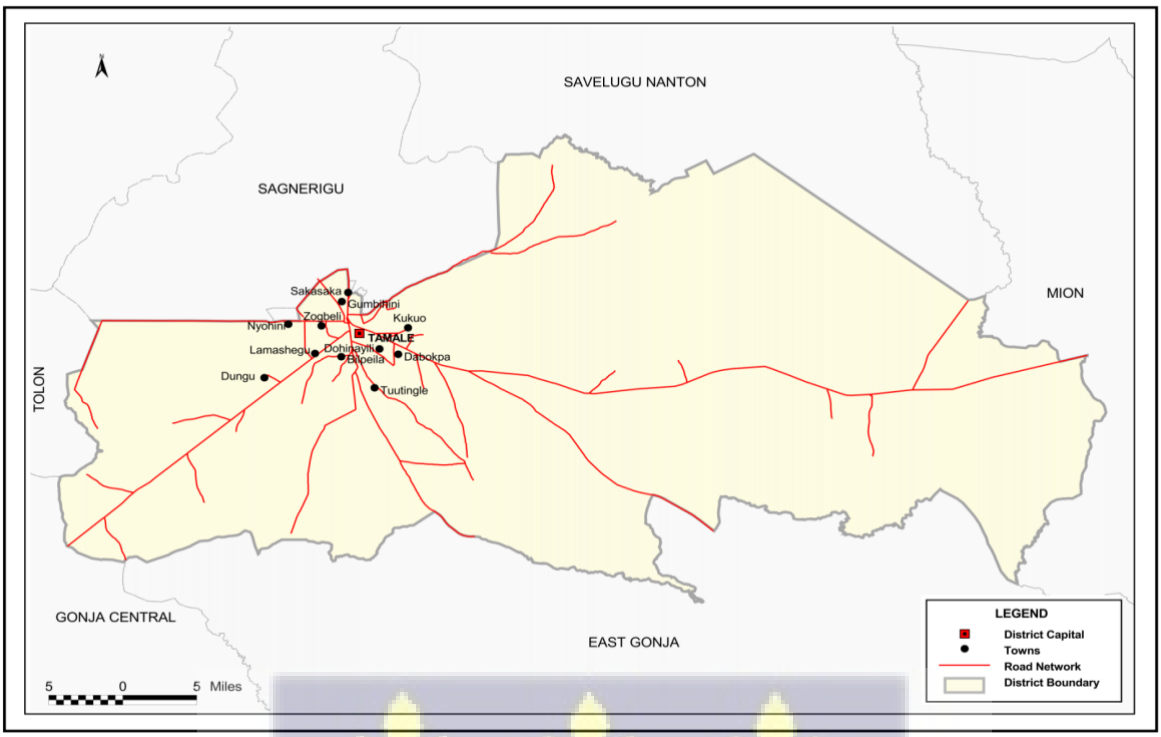
3.5.3 Economic Activities

About 63.3 percent of the population aged 15 years and older in the metropolis are economically active (GSS, 2014b). Of this, 92.6 percent are employed while 7.4 percent are unemployed (GSS, 2014b). The highest percentages of those employed are in the private informal sector (83.2%) whiles the public sector employs 11.3%. About 33% of the employed are engaged in sales and services followed by those in the arts and crafts sector (GSS, 2014b). Those engaged in agriculture, forestry and fishery constitute about 17.6% with professionals being only about 8.1% (GSS, 2014b). There are more men than women in almost all categories of work except in the sales and services. There are four major markets in the area. They are the Tamale Central Market, Kukuo, Aboabo and Lamashegu markets. The presence of many financial institutions in the metropolis is an indication of the high level of economic activities in the area. The financial institutions include: Absa Bank, Standard Charted Bank, Stanbic Bank, Ghana Commercial Bank, Agricultural Development Bank, Zenith Bank amongst others.

3.5.4 Health care

The Tamale Metropolis has 34 health facilities excluding the teaching hospital (TaMA, 2020). There are two government hospitals, five private hospitals and 1 CHAG hospital. All 5 health centers, 1 rehabilitation home and 17 CHPS compounds in the metropolis are owned by government. The 2 maternity homes in the Metropolis are privately owned. There are 6 clinics, 2 is owned by government and the rest (4) are private clinics.

Figure 3.3: Map of Tamale Metropolitan Assembly



Source: Ghana Statistical Service, District Analytical Reports, 2014B

3.6 Profile of West Mamprusi district

The West Mamprusi District was created in 1988 under Legislative Instrument (LI) I 1448, which was later in 2012 replaced with LI 2061 following the creation of the Mamprugu Moagduri District (GSS, 2014d). The district is located within longitudes 0°35'W and 1°45'W and Latitude 9°55'N and 10°35'N. It has a total land size area of 2610.44 sq km and shares boundaries with East Mamprusi and Gushiegu Districts to the east; North Gonja, Savelugu and Kumbungu Districts to the south; Builsa, Kassena-Nankana East Districts and Bolgatanga municipal (Upper East Region) to the north and; to the west, Mamprusi Moagduri District (GSS, 2014d). The West Mamprusi District has Walewale as its capital. The district lies within the newly created North East region, it's close proximity to the Upper East region facilitates a strong economic and functional bond with Bolgatanga and Fumbisi (figure 4.4).

3.6.1 Population

The West Mamprusi District has a population of 121,117 (GSS, 2010). About 50.8 percent of the district's population is females while 49.2 are males (GSS, 2014d). The population density of West Mamprusi District is 46.4 per sq km and the sex ratio of 96.8 (GSS, 2014d). The district has an average household size of 8.4 with children constituting the largest number in the household structure. The district is predominantly rural (63.2%) with about 6 out of 10 persons living in rural communities (GSS, 2014d). Walewale is the only urban centre in the district and where the social amenities are concentrated.

3.6.2 Social Organisation

The Mamprusi constitute about 75 percent of the total population of the district largely inhabits the West Mamprusi District (GSS, 2014d). This dominant ethnic group coexists harmoniously with minor groups such as the Builsa (4.7%), Frafra (2.7%), Kasena (2.2%), the Dagomba (1.8%), and some other ethnic groups in Ghana (GSS, 2014d). The main traditional festivals celebrated in the district are the Bugun (fire festival) and Damba festivals. The dominant religions are Islam (79.4%), Christianity (15.6%) and the Traditionalists (3.7%) (GSS, 2014d).

3.6.3 Economic activities

About 67.7 percent of the population aged 15 years and older are economically active while 32.3 percent are economically not active (GSS, 2014d). Of the employed population 15 years and older three-fifths (60.0) percent are self-employed without employees, 31.1 percent are contributing family workers and 4.9 percent are employees (GSS, 2014d). Overall, males are more likely than females to be self-employed with employees and themselves employees. On the other hand, females are more likely than males to be contributing family workers. The private informal sector is the largest employer in the district, employing 95.8 of the working

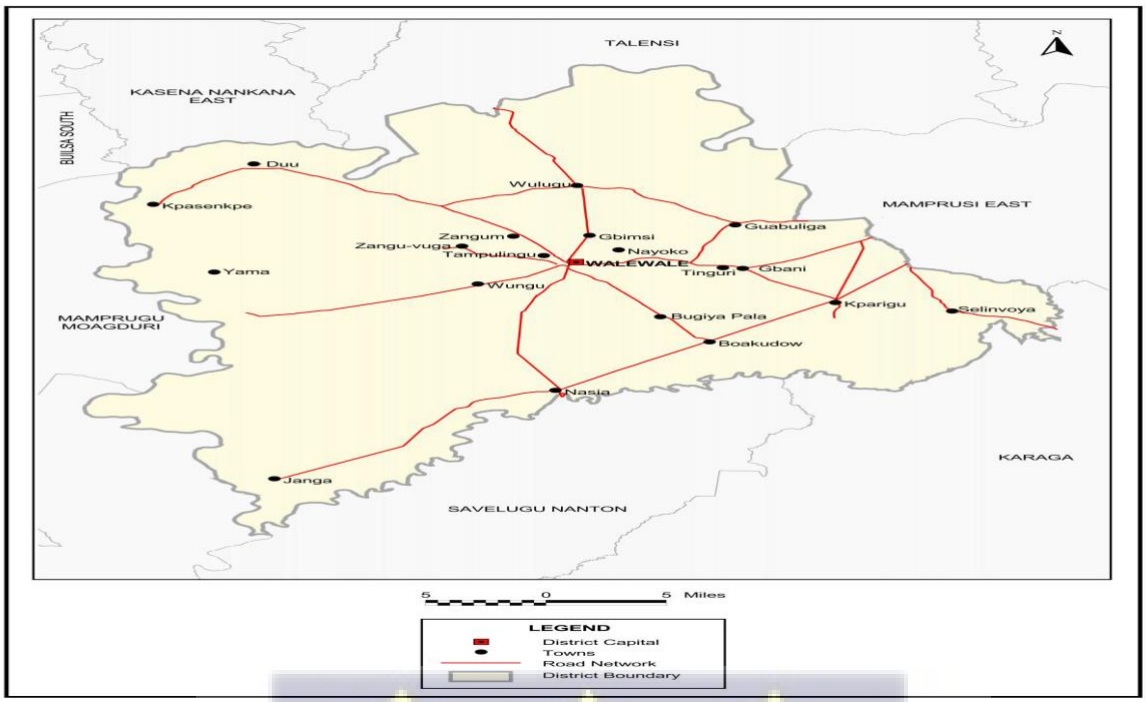
population followed by the public sector with 3.1 percent (GSS, 2014d). Whereas males (4.3%) are more likely than females (1.8%) to be employed by the public sector, females (97.1%) are likelier than males (94.5%) to be employed by the private informal sector in sales and services (GSS, 2014d).

Crop production in the district is on a subsistence basis where small farm holder farmers produce for family upkeep and occasional sale. There are, however, some forms of commercial farming. The major crops grown in the district are maize, millet, rice, groundnuts, beans, sorghum, bambara beans and yam. These crops are grown during the rainy season. Dry season farming is done along the banks of the White Volta during which crops such as tomatoes, onions, soybeans, pepper and tobacco are cultivated. Animals such as cattle, goats and sheep are the most reared in the district.

3.6.4 Health care

Health facilities in the district are few and woefully inadequate. The highest level of health delivery system in the district is the Walewale District Hospital which serves as a referral centre. There are four other private and public health facilities in the district. These are the Janga Polyclinic, Kpasenkpe Health Centre, Kparigu PPAG clinic, Mandela and Our Lady of Roccio private clinics in Walewale. Other health facilities are the CHPS compounds at Gbeo, Nasia, and Guabuliga.

Figure 3.4: Map of West-Mamprusi District



Source: Ghana Statistical Service, District Analytical Reports, 2014c

3.7 Research Design

The research problem determines the kind of research design to be adopted. It systematically outlines the nature of information needed, the appropriate methods of data collection and how to analyze the information collected (Creswell and Creswell, 2017). Data was collected sequentially to understand the research questions and to design appropriate tools for the collection of appropriate data to answer the question. The main purpose of this study is to examine the role that Microfinance institutions can play to improve health financing by reducing the financial health risk of people. This study is a cross-sectional study and made use of both primary and secondary data sources. Both qualitative and quantitative methodologies were used to analyze the data collected.

The mixed methods approach allowed for a more complete utilization of data than would have been achieved with the use of only qualitative or quantitative methodologies (Creswell and Creswell, 2017). The mixed methods approach is employed in this study in order to: (1)

examine and explore the research questions from the different perspectives of stakeholders; (2) for the purpose of having a deeper understanding of the research question and (3) to achieve triangulation. This allowed the different context to be well explored in order to clearly bring out the nuances that may be context specific.

3.7.1 Sampling and Sample Size

The sampling design employed for the household survey in this study is a three-staged probability sampling design. Based on the Ghana Statistical Services' classification of the districts into urban and rural districts, one district/municipal assembly was chosen from each category for each region (GSS, 2010). This gave a total of four districts/municipal assemblies (as shown in Table 3.1). To get these four districts, the 29 districts/municipalities/metropolis in both the Greater Accra region and Northern region were listed. With a sample size of two for each region, a sample interval of 14 was obtained. From the first listed district, the fourteenth district was selected from each category (rural/urban) for each region.

In the second stage, using the lists of communities as the sampling frame, communities were randomly selected in each district. The number of communities selected from each district was dependent on the sample size. Fifty respondents were to be engaged from each community. The communities served as the primary sampling units (PSU) in this study. The probability proportion to size (PPS) sampling procedure was employed to determine the sample size. The number of respondents in each district was based on the districts'/municipalities' share of the total number of households in the four districts. However, to allow for intra-district analysis, Tamale Metro and West-Mamprusi were over sampled.

The third stage was the selection of households to be included in the study. With the list of households in the selected communities, a maximum of 50 households were systematically selected with a random start and interval separately in each community, to give a total of 890 households from the selected communities in the four districts. The selected households formed the secondary sampling units (SSU). Though it is not a requirement for households to take up health insurance as a single unit, these decisions are made at the household level. The target was the household head and or the spouse. Both the household head and or the spouse will be interviewed because it is commonly known that in Ghana, decisions at the household level is usually a joint one among couples (GSS, 2008).

MFIs were purposively selected from the study districts to throw light on the methodology they use to reach clients, how they can be incorporated into the health financing framework and what costs and benefits could come out of the collaboration with government. Because of the difficulty in reaching MFIs those who agreed to be included in the study were the ones contacted.

The total target population for this study was 279,112 households; 179, 251 in La; 35,408 in Tamale Metro; 50,021 in Shai-Osudoku and 14,432 in West Mamprusi (GSS, 2014a, 2014b, 2014c, 2014d). Using the Morgan and Krejcie (1970) sample selection formula a minimum sample size of 384 was obtained. The assumptions underlying the determination of the sample size include a sampling error of 5 %, 95 % confidence interval and a standard population proportion of 50 %. Following Kusi et al (2015), the study oversampled to obtain a sample size of 890, a sample close to the minimum sample size of 768 households. This is to increase the reliability of the data and reduce the degree of error. Using Krejcie and Morgan's (1970) formula as presented below:

$$n = \frac{Z^2 * N * p(1-p)}{M^2(N-1) + Z^2 * p(1-p)} \quad (4.0)$$

Where
n = sample size
N = Population size
Z = Z value (1.96 for 95% confidence level)
p = population proportion (assumed as 0.5 or 50%)
M = Margin of error at 5% (0.05).

In the distribution of the sample size among the four assemblies, La-dadekotopon has a proportionate sample of 499 households; Tamale Metro has 200; Shai-Osudoku has 141 and West Mamprusi has 50 households. To allow for comparison between localities, Tamale Metropolitan and West Mamprusi were over sampled. This is because the sample size was too small to make any meaningful analysis and comparison between the North and South.

Table 3.1: List of Regions, districts, and communities selected and number of selected Households

Region	District	Communities		Community selected	No. of HHs selected
Greater Accra	La-Dadekotopon	• La • Burma Camp • North Labone • South La	• Cantonments • Airport • East Cantonments	• La • South La • North-Labone • East Cantonments • Burma Camp	499
	Shai-Osudoku	• Dodowa • Ningo Kope • Asutsuare	• Osuweme • Hwapa • Atsvanya	• Kodiabe • Osuweme • Agomeda	141

		• Kodiabe • Agomeda • Jorpanye • Benyumu • Asebi • Wedokum • Akuffopanyin	• Volisvo • Ayikuma • Odumasi • Kusunya • Attipoe village • Dedenya •		
Northern	Tamale Metro	• Dagbangdabi-Fong • Changli, • Benpiela, • BuglanaFong • Tishigu • Abu-Abu • Tamale • Dungu • Nyuhni • Gumbihni	• Moshi Zongo • Vitteng • Sakasaka • Kalpohin Estates • Zogbeli • Lamakara • Lamashegu • Kukuo • Datokpa • Tuutingle • Doyinayili	• Kukuo • Sakasaka • Tishigu • Dagbandabi-fong	200
	West Mamprusi	• Walewale • Wulugu • Duu • Kpesenkpe • Yama • Zangum • Zangu-vuga • Tampulingu • Selinvoya • Nasia	• Wungu • Gbimsi • Nyayoko • Tinguri • Guabuiliga • Gbani • Bugiya Pala • Boakudow • Kparigu • Janga	• Guabuiliga	50

Source: GSS, 2010 and Author, 2019

The selection of the respondent households also followed a multi-staged systematic approach. Fifty (50) respondents were selected in each community. With the assistance of a community leader, the community was divided into four parts from the centre of the community. The spread of the households was to give a good representation of people with different socio-economic characteristics within the community. Between 12 and 13 households were selected in each cluster. With a random start, every third house was visited and based on the availability of the households' one was invited to participate in the survey.

3.8 Data Collection Methods

Data was collected through both primary qualitative and quantitative as well as secondary sources. Three different instruments were used to collect data: Focus Group Discussions (FGD), Key informant interviews and survey questionnaire. Through the review of literature, some institutions that are involved in Health financing at different levels and others that could provide relevant information were identified. These include: The Ministry of Health, the National Identification Authority, OXFAM, USAID, Bank of Ghana (BOG) and the Ghana Association of Microfinance Companies (GAMC). Qualitative data was obtained from Focus Group Discussions (FGD), Key Informant and in-depth interviews with the stakeholders identified above. The key informant interviews focused on identifying the key stakeholders in the health-financing sector, their role, existing health financing policies, private-public partnership in health financing, the role that MFI's can play and the challenges in health financing. The Ghana Association of Microfinance Companies (GAMC) also provided information on the role that MFI's can play and how they can fit into the current health financing system, the regulations and policies that need to be put in place, the success factors of the health financing collaboration.

Eight Focus group discussions were held at the community level, two in each district. The participants were purposively drawn from churches, susu groups, women groups and the general population. Similar to key informant interviews, consent was sought before the discussion was recorded but where permission was declined notes were taken. There were between 6 to 8 participants in each group. Both male and female participants formed the groups. The interviews lasted between forty-five minutes to one hour. However, participants from one of the groups in tamale metro were females only because they were drawn from a women's susu group. Participants were within the twenty-five to seventy age range. Focus group discussions were used to find the attributes that are important to households when signing on to a health insurance scheme. The attributes identified were incorporated into the questionnaire that was used to collect data on household's willingness to pay for health insurance through MFI's. FGD was also used to open up discussions about the challenges in accessing finance for health and the strategies used to cope with unexpected health expenditure. These discussions helped shape the survey questionnaires and also helped provide a good source of knowledge on health insurance behavior and coping mechanisms.

The survey questionnaire was used to collect quantitative data from the households. The data captured in the household survey includes information on household socio-demographic characteristics, general health status and hospitalization, insurance status and behavior, testing of the theory on planned behavior, knowledge of MFI's and their activities, critical success factors and the ability to pay. The survey was used to elicit determinants of household's willingness to participate in and pay for health insurance through MFI's using the contingent valuation method.

The Contingent Valuation Method (CVM) was used to elicit willingness to pay. CVM is a survey method where respondents state their preference in hypothetical scenarios (Markandya

et al, 2018). This helps in the estimation of goods and services that are not on the market yet. The literature reviewed and the FGD's were used to design a hypothetical scenario for improved health insurance delivered through MFI's. CVM was used in this study because the bargaining process closely mimics what buyers and sellers go through in negotiating prices in Ghana. This makes it easy for respondents to identify with and therefore likely to elicit the real value they attach to the service or good.

One criticism against CVM is that people may still give desirable responses because they know it is a hypothetical situation and so they will not be required to make any real payments. However, since the study did not give any starting price, the respondents were likely to start with a price they are actually willing to pay. This also removes bid bias. In order to ensure that respondents put a lot of thought into their responses and also provide a price that is close to what they are actually willing to pay, the hypothetical scenarios were well defined and the trade-offs precisely defined. This helped in providing the respondents with the needed information and time to respond appropriately.

Secondary data in the form of quarterly reports, policy documents and reports on the health financing system, government spending on health and health insurance were obtained from the Ministry of Health, NHIA, Ministry of finance, the World Bank and GAMC. These were used to review literature and add to the discussions of the results that were obtained from the survey. Input and output data of MFIs collected from the quarterly reports sent to GAMC. This data was used to assess the cost efficiency of MFI's. Ethical approval for this study was sought from the Ethics committee for the Humanities of the University of Ghana, Legon.

3.9 Method of Data Analysis

In this section, the method of data analysis for each objective is presented. Due to the mixed methods approach used, data was analyzed using both qualitative and quantitative methods. Institutional analysis and thematic content analysis were used to analyze the qualitative data, while, STATA version 13.1 was used to analyze quantitative data, that is, objectives 2 and 3.

3.9.1 The role of MFIs in the health financing

Following Abimbola et al (2017), institutional analysis was used to analyze the relationship between the various actors in the health financing sector, how these relationships are made, monitored, changed and enforced in order to achieve health-financing goals. This section of the work was analyzed with this tool because it looks beyond the various actors and how they are engaged in health financing by also looking at both the formal and informal systems governing the relationships between the actors in the sector. This section of the work is important because without assessing the role of other actors it will be difficult to know the role that MFIs can effectively play. It was equally important to know the views and perceptions of the actors on the role they thought MFIs could play and what could facilitate or hinder that role in the health financing space. Thematic content analysis was also used to analyze the interview texts and documents to understand the interactions between the actors and their role.

3.9.2 Determinants of households' willingness to participate and pay for health insurance through MFI's

To analyze willingness of households to participate and pay for health insurance through MFI's, household heads or their spouses were asked if they were willing to participate and how much they were willing to pay. Willingness to participate is a binary variable

represented by 1 "Yes" and 0 "No". A binary logistic regression model was used to estimate this result and is presented as:

$$\text{logit}(p) = \text{In}\ p/(1\text{-}p) = \beta + \beta_1 att_1 + \beta_2 pbc + \beta_3 snorm + \beta_4 age + \beta_5 employment + \beta_6 education + \beta_7 maritalstatus + \beta_8 healthinsurancestatus + \beta_9 freqofvisit + \beta_{10} healthstatus + \beta_{11} preferredfacility + \beta_{12} residence \quad (4.1)$$

Where p is the estimator when the dependent variable is the binary willingness to participate.

How much they are willing to pay is contingent on the hypothetical project presented to them. The responses for the households WTP for health insurance through MFI's is quoted in Ghana cedis. The Tobit regression model is a popular method in econometrics for analyzing censored data, where some observations are only partially observed and fall below or above a certain threshold value. A key advantage of the Tobit model is its ability to account for censored data and provide unbiased estimates of regression coefficients even in the presence of censoring. In contrast to other methods, such as the truncated regression model, Tobit regression takes into account the full range of the dependent variable, not just the observed portion, which can improve the accuracy of estimates (Greene, 2003).

The Tobit model has been widely used in various fields of research, including economics, finance, marketing, and social sciences, to name a few. For instance, in the field of health economics, Tobit models have been used to analyze the effect of insurance coverage on healthcare utilization (Lee et al., 2013), while in finance, Tobit models have been applied to examine the relationship between insider trading and stock returns (Gao and Jain, 2011).

Overall, the Tobit regression model is a powerful tool for analyzing censored data and has proven effective in many different fields of research. Its ability to handle censored data makes it a valuable tool for researchers who encounter data with truncation or censoring.

The dependent variable i.e., WTP is continuous and censored at zero. Following Greene (2003), the study used the tobit regression model as the most appropriate estimating tool. The tobit regression model is expressed as found in Green, 2003:

$$y_i^* = x_i^l\beta + \mu_i \quad (4.2)$$

$y_i = y_i$ if $y_i > 0$, that is the utility derived from paying for an improvement in health insurance through MFI's.

$y_i = 0$ if $y_i \leq 0$, this is the derived utility from not paying for health insurance through MFI's.

Where

y_i^* is the unobserved latent variable

y_i is the dependent variable

x^l is a set of independent variables

β is the coefficient yet to be estimated

μ is the error term assumed to be independent and normally distributed with a zero mean and constant variance (σ^2).

With the log likelihood of the tobit regression model specified as:

$$InL = \sum_{y_i>0} -\frac{1}{2}\left[\log(2\gamma) + In\sigma^2 + \frac{(y_i - x_i^l\beta)^2}{\sigma^2}\right] + \sum_{y_i=0} \text{In}\left[1 - \varphi\left(\frac{x_i^l\beta}{\sigma}\right)\right] \quad (4.3)$$

InL is maximized with respect to β and σ to get the maximum likelihood estimates of the parameters. The likelihood function consists of two parts. The first part of the equation is the linear model part for the uncensored part of the observations. The second part shows the important probabilities for the uncensored observations (Wooldridge, 2010).

The empirical model for households' willingness to pay is as follows:

$$\mathbf{WTP}=\alpha+\beta 1age+\beta 2edu+\beta 3income+\beta 4occupation+\beta 5gender+\beta 6mar+\beta 6ethnicity+\beta 7residence+\beta 6healthinsurancestatus+\beta 6householdsize+\beta 6preferredfacility+\beta 6healthstatus+\beta 10att+\beta 11pbc+\beta 12snorm+e \quad (4.4)$$

In which α represents the constant and β, the co-efficient of the explanatory variables and *e* is the error term (Dror et al, 2007).

3.9.3 Choice and Description of variables

Based on the literature reviewed and the data collected, the variables that were used to determine behavioral intention and willingness to pay are presented in the table 4. 2.

Table 3.2: Description of Variables to determine behavioral intention and willingness to pay

Variable	Description	Measurement	Sign	Variable type
		Dependent variables		
Willingness to participate	Household's willingness to participate in the hypothetical scheme	Yes=1 No=0	N/A	Dichotomous
Willingness to pay	Maximum amount households are willing to pay for health insurance	Ghana cedis	N/A	Continuous
Behavioral intention	Behavioral intention of households towards health insurance	1=Strongly agree 2=Agree 3=Neutral 4=Disagree 5=Strongly disagree	N/A	Ordinal
		Independent Variables **Socio-demographic factors**		
Ethnicity			+	
Sex	Gender of respondent	1=Female 0=Male	+/-	Categorical (dummy)
Age	Age of respondent	0=15-34 1=35-54 2=55-64 3=65+	-	Categorical
Marital status	Marital status of respondent	0=Not married 1=Married	+	Categorical
Occupation	Sector of respondent's	0=Unemployed	+	Categorical

	occupation	1=Formal sector 2=Informal sector		
Household size	Number of people in the household	Number of persons in respondent's household	+	Continuous
Education	Level of respondent education	0=No formal education 1=Primary 2=Middle/JHS 3=Secondary+	+	Categorical
		Economic		
Wealth	Wealth index constructed with household asset	0=Poorest 1=Poor 2=Middle 3=Rich 4=Richest	+	Categorical
		Socio-Psychological		
Attitude	Household attitude towards health insurance	Mean value of a five-point likert scale	+	Continuous
Subjective norm	Perception of social pressure to take on health insurance	Mean value of a five-point likert scale	+	Continuous
Perceived behavioral control	Perception of ease or difficulty to acquire health insurance	Mean value of a five-point likert scale	+	Continuous
		Other factors		
Frequency of hospital visit	Frequency of visits to the hospital	0=Don't remember 1=At least once a month 2=At least once in 3 months 3=At least once in six months 4=At least once a year	+	Categorical
Last episode of illness in household	Last episode of illness in household	0=Don't remember 1=Within past one month 2=Within past three months 3=More than three months	+	Categorical
Health insurance status	Health insurance status	1=Yes 0=No	+	Dichotomous (dummy)
Source of treatment when ill	Usual source of treatment when ill	0=Treatment from a doctor 1=Treatment without a doctor	-	Dichotomous (Dummy)

Source: Author, 2020.

3.9.4 Cost efficiency analysis

Cost efficiency reflects how close the real cost of an MFI is to that of a best practice MFI given the same output under similar conditions. The cost function was specified using a cobb-Douglas functional form as used in other studies like Abdulai and Tewari (2016) and Oteng-Abayie et al (2011).

$$InTC=\beta + \beta_i\, InSALARY_i + \beta_2 \ln\text{INTPERDEPOSIT}_i + \beta_3 InGLP_i + \beta_4\, InABORROWERS_i + U_i + V_i \quad (4.5)$$

From the cost function, SALARY and INTPERDEPOSIT are inputs while GLP and ABORROWERS are outputs. All the variables were taken in logs.

Where

TC= Total cost faced by an MFI: It is measured as the total expenses divided by total asset ratio and multiplied by total asset.

SALARY=Price of one unit of labor per year: It is measured as the operating expense divided by total asset ratio and multiplied by total asset.

INTPERDEPOSIT=Interest Charged per deposit taken

GLP= Gross Loan Portfolio: It is measured as the total outstanding loans, including, current, delinquent and rescheduled loans but excluding written off loans and interest receivable.

ABORROWERS= Number of active Borrowers: Measured as the total number of clients currently assessing a loan product.

V_i= Random disturbance term

U_i = Inefficiency term

To determine the factors that influence inefficiency, the computed mean inefficiency ratio is regressed on MFI-specific variables. The inefficiency model is specified as:

U_i= f(CPB, ALB, SAVINGS, AS, PAR, Age)
(4.6)

Where

U_i= Level of individual MFIs' inefficiency

CPB= Cost per borrower: It is measured as the ratio of operating expense to number of active borrowers.

ALB=Average loan balance: This is measured as total loans divided by number of active borrowers

SAVINGS: Total savings portfolio

AS= Asset size: measures the size of an MFI.

PAR=Portfolio at risk: measures quality of MFI asset that are at risk for over 30 days.

AGE: The number of complete years of operation.

3.10 Data Limitations

Access to data within the Microfinance industry was a major limitation in this study. Collecting data from individual MFI's would have been ideal but MFIs were not willing to give out information on the indicators of interest. Annual and quarterly reporting to the GAMC was low and quarter on quarter attrition was high. While some MFIs reported on only one or two quarters a year, others did not report data points of interest. This affected the number of MFIs and quarterly reports included in the study. Efficiency is best measured over a period of time, however as a result of the unavailability of data, only data for the first quarter of 2018 was whole enough to be used. This affected the measure of efficiency as the SFA works better with panel data than cross-sectional data.

Also, the two private health insurance providers contacted, declined participation in the study. Their participation would have enriched analysis on the role of private health insurance

companies and the role they think MFI's can play in health financing in Ghana. Their participation does not however take anything away from the quality of data sourced from other actors in the health financing sector.

CHAPTER FOUR

COST EFFCIENCY ANALYSIS OF PROVIDING HEALTH INSURANCE THROUGH MFI'S

4.1 Introduction

This chapter seeks to analyze the cost effectiveness of using MFIs as a platform to facilitate health insurance uptake and therefore improve health financing in Ghana. First the chapter looks into the efficiency of MFIs in their own operations. Finding out how efficient they are currently will help determine whether they can really serve as a platform for a national program like the NHIS. The second part of the chapter focuses on the cost effectiveness of the proposed collaboration disaggregated by income groups. This disaggregation is to analyze the differential impact of the proposed product on the different segments of the population.

4.2 Profile of respondent MFIs

In all, the data of forty-one MFI's were included in this analysis. First quarter (2018) financial reports of the MFI's were sourced from the Ghana Association of Micro-finance Companies. From Table 4.1, most of the sampled MFIs are found in the Greater Accra region, followed by Ashanti, Western and Eastern regions with 53.66%, 19.51, 14.63% and 4.88% respectively. The rest of the regions are represented by one MFI each, that is, the Northern, Central and Brong Ahafo regions. Most of the MFI's have been in operation for seven or more years (58.5%), while most of them have staff of less than 20 (65.85%).

Most of the MFI's had 201 or more active borrowers whiles majority have active savers between 150 and 2000.

Table 4.1: Characteristics of MFI's

Region	**Frequency**	**Total**
G. Accra	22	53.66
Eastern	2	4.88
Western	6	14.63
Northern	1	2.22
Central	1	2.22
Ashanti	8	19.51
B. Ahafo	1	2.22
Total	41	100
No. Years in operation	**Frequency**	**Total**
5	3	7.32
6	14	34.15
7	19	46.34
8	5	12.20
Total	41	100
No. of staff	**Frequency**	**Total**
3-10	15	36.59
11-20	12	29.26
21-30	9	21.95
31+	5	12.20
Total	41	100
Number of active borrowers	**Frequency**	**Total**
11-100	8	19.51
101-200	8	19.51
201-300	11	26.83
301-400	3	7.32
401-1000	5	12.19
1001-2000	3	7.32
2001+	3	7.32
Total	41	100
Number of Active Savers	**Frequency**	**Total**
150-2000	21	51.22
2001-4000	6	14.43
4001-6000	5	12.19
6001-10000	5	12.19
10,000+	4	9.97
Total	**41**	**100**

Source: Authors field data, 2020

4.3 Cost efficiency of Microfinance institutions

Table 4.2 shows the maximum likelihood estimates of the Cobb-Douglas Stochastic Cost Frontier model. The overall model is significant at 1% and the lambda is also significant at 1% showing that there is inefficiency between the MFIs in the study. The sum of the elasticities of the input variables, that is, 1.11 shows that there is a constant cost to size. The total variance, sigma u = 0.88 and significant at 1% shows that there are wide variations in the cost differences of MFIs. Only two of the coefficients estimated are significant at 1% and 5% respectively. The positive coefficient of both interest on deposit and Gross Loan Portfolio shows an outward shift of the cost function and hence higher cost. The interest payment on client savings constitutes 21% of total cost, whiles Gross Loan Portfolio constitute a greater percentage (95%) of cost to the MFIs under study.

Table 4.2: Maximum likelihood estimates of the Cost function

lnOC	Parameter Estimate	Std. Err.	z	P>z
lnSALARY	0.08	0.29	0.26	0.79
lnINTPERDEPOSIT	0.21	0.09	2.22	0.03**
lnGLP	0.95	0.20	4.76	0.00***
lnBORROWERS	-0.13	0.15	-0.87	0.38
_cons	-2.09	2.24	-0.94	0.35
Usigma	-0.25	0.50	-0.49	0.62
Vsigma	-0.88	0.40	-2.17	0.03
sigma_u	0.88	0.22	3.97	0.00
sigma_v	0.65	0.13	4.96	0.00
lambda	1.37	0.30	4.62	0.00

Notes: Wald chi2(4) =45.76 Prob > chi2 = 0.0000 Number of observations =41

Source: Author, 2020

The distribution of cost efficiency ranges between 5% and 58% across the sampled MFIs, with a mean inefficiency score of 50%. This shows significant inefficiency between the

firms. The MFIs in the Eastern region have the highest level of efficiency followed by Western region (53%) and the Greater Accra region. The MFIs with the worst efficiency are found in the Central, Brong Ahafo, Northern and Ashanti regions with efficiency scores of 5%, 24%, 42% and 44% respectively. This shows that MFIs in Eastern, Western and Greater Accra regions are more likely to be cost efficient than those found in the other regions.

Table 4.3: Cost efficiency level by region

Region	**u**
Ashanti	0.44
B. Ahafo	0.24
Central	0.05
Eastern	0.58
G. Accra	0.53
Northern	0.42
Western	0.56
Overall	0.50

Source: Author, 2020

Average loan per saving computed in Table 4.4 indicates that clients are given loan amounts that ranges between amounts that are less than their savings and up to about three times their savings balance. On average however, clients are given loans of about 2 times the savings that they have.

Table 4.4: Loans per savings Ratio

Variable	Mean	Std. Error	Minimum	Maximum
Loans per savings	1.724	.781	.145	3.303

Source: Author, 2020

4.4 Drivers of inefficiency

To further explore the efficiency of MFIs, it is important to look at the determinants of efficiency. The model results show that factors such as Cost Per Borrower, Average Loan

Balance, Deposit Per Saver and asset are not significant determinants of efficiency. The significant factors are savings and asset. Savings is negative and significant at 1%, whiles asset size is positive and significant at 5%. The result for savings indicates that, a 1% increase in savings will reduce inefficiency by about 40%, while a bigger asset size increases inefficiency by about 45%. Though Average Loan Balance is not significant the coefficient is negative suggesting that it reduces inefficiency.

Table 4.5: Determinants of inefficiency

Variable	Coef.	Std. Err.	P>t
LogCPB	0.139	0.182	0.449
LogALB	-0.274	0.174	0.125
LogTSAVINGS	-0.399	0.132	0.005
LogAS	0.456	0.199	0.028
LogPAR	-0.137	0.090	0.138
LogAge	0.683	1.289	0.600
_cons	1.421	3.192	0.659

Number of obs = 41 Prob > F = 0.043 R-squared = 0.3035

Source: Author, 2020

4.5 Discussions

The Stochastic Frontier Approach (SFA) has been used over the years to measure the efficiency of Microfinance institutions. Most efficiency estimates use panel data however; this study utilizes a cross sectional data to study the cost efficiency of MFIs in tier two in the first quarter of 2018. The study of cost efficiency is meant to determine what factors challenge firms in their operations limiting their ability to perform at the maximum.

This study found that Gross Loan Portfolio (GLP) and Interest on deposit constitute significant cost to the MFIs in the study. GLP serves as the largest asset of an MFI and since the primary objective of MFIs is to provide loans, it is not surprising that the GLP constitutes

the largest cost to MFIs. The significant and positive coefficient of Gross Loan Portfolio means that an increase in GLP will lead to increase in cost efficiency of the MFIs. An increase in GLP may not necessarily mean smaller loans but certainly means more loans. This could be an indication that the MFIs are lending to poor populations and suggest more outreach. The collection of micro-loans is costlier than large loans. The quality of the loan portfolio is indicative of the ability of the MFI to recover their loans (Ayayi & Sene, 2010) and has implications on profitability and sustainability (Bitok et al, 2020). This makes the management of the loan portfolio a very important component of MFI activities.

Interest payment on deposit is a component of MFI cost and affects efficiency. In this study interest payment on deposit takes about 21% of total cost. This is higher than what is found in Oteng-Abayie et al (2011) and Abdulai and Tewari (2016) (18 and >7 % respectively) probably because the Bank of Ghana licensed all the MFIs in this study to take deposit. Oteng-Abayie (2011) and Abdulai and Tewari (2016) reported lower values because some of the institutions in their data were not deposit taking MFI's.

The distribution of the cost efficiency score shows that there is significant inefficiency among the regions. The firms exhibited significant inefficiency of 42% to 95%. The best efficiency scores can be found among MFIs in the Eastern, Western and Greater Accra regions whiles the worst are found in the Central, Brong Ahafo and Northern regions. This spatial variation in efficiency could be as a result of the differences in regional attributes such as the level of economic activity and poverty in the region (Oteng-Abayie et al, 2022; Molini, 2015). These differences in environmental factors according to Ganle et al (2015) can serve as limiting or facilitating factor in the delivery of Microfinance in a given area. According to Oteng-Abayie (2022), Microfinance has the potential to increase the intensity of economic activity in an area which also has the effect of reducing poverty and inequality. The average cost efficiency

of 50% shows that MFIs in the study can reduce cost by 50% and still be able to produce at the current level. Also, if the average MFI was to produce at the level of the most efficient MFI, they could save cost of about 13.8% (1-(50/58)) while the most economically inefficient firm could save cost of about 90% (1-(5/50)). This confirms work by Oteng-Abayie et al (2011).

Findings on Loan per savings reveal that on average, MFIs issue an equivalent of about twice the amount of money the client has as savings. This is indicative that MFIs are offering small loans and that they are serving poorer clients. In comparison to this work, Oteng-Abayie et al (2011) found that MFIs were offering about four times client savings as loans and concluded that MFIs were not particularly serving the poor but the unbanked generally.

Savings and asset size are strong determinants of inefficiency in this study. The results showing that the ability of an MFI to collect savings significantly reduces inefficiency. This correlates with studies like that of Oteng-Abayie et al (2011) and Abdulai and Tewari (2016). Savings serves as a source of cheap funds for Microfinance institutions, allowing them to lend at lower interest rates, which can lead to client retention and progression. Asset size has a positive and significant co-efficient which means that larger MFIs are less efficient. Larger MFIs may give out more loans however if their recovery system is bad it may lead to low repayment which may increase inefficiency. This contradicts findings by Kumar and Sensamar (2017). They reported a negative and significant asset size, which suggests that larger MFIs are more efficient than smaller ones. They attributed this to the influence of economies of scale.

Though the age of MFI was not a significant variable, it is positive which shows that as an MFI increase in the number of years in operation, they become more inefficient. The insignificance of age shows that the learning curve effect found by this study has no impact

on the efficiency of the MFIs in this study. This confirms Abdulai and Tewari (2016) but contradict Hermes et al (2009).

4.6 Conclusion

The stochastic Frontier Cost Approach for cross-sectional data is applied by this study to investigate the cost efficiency of MFIs in Ghana. The study found evidence that inefficiencies exist in the MFI sector with most MFIs operating below an efficiency level of 50%. MFIs have to therefore find appropriate strategies to reduce these cost inefficiencies. Wide variations also exist within regions and this is a reflection of the poverty status of majority of the population in these regions.

The significance of savings gives credence to the opinion that MFIs must intensify efforts to increase revenue mobilization. Though MFIs may feel challenged by the competition in the sector and from commercial banks, they still seem to target the poor. MFIs have to operate a diversified portfolio because GLP constitutes a significant source of cost inefficiency in the sector. This will improve the quality of the portfolio in order to reduce its effect on the over-all cost efficiency. Among the determinants of inefficiency total size of savings portfolio improves efficiency while asset size increases inefficiency. Savings mobilization holds a lot of potential for the MFI industry and must be intensified in order to provide cheap source of funds for the industry.

CHAPTER FIVE

WILLINGNESS TO PAY AND PARTICIPATE IN HEALTH INSURANCE THROUGH MFI'S

5.1 Introduction

This chapter presents the results of the study on the factors that may influence the participation of households in paying for health insurance through MFIs. The analysis is based on the survey of 890 households in four districts of the Northern and Greater Accra regions. The chapter is divided into three sections. The first section presents the demographic characteristics of the respondents and the variables of interest in the study whiles the second section presents the average premium households are willing to pay. The various factors that will influence households in their decision to take part in the proposed health insurance scheme are also examined in this section. The last section discusses the major findings and draws conclusions based on the findings.

5.2 Background characteristics of respondents

Table 5.1 shows that 78.5 percent of the respondents are from urban areas whiles 21.4% are from rural communities. About 22.0 percent of the respondents from the Greater Accra region were from a rural district with 77.9 percent from an urban district whiles 20 percent of the respondents from the Northern region can be found in a rural district with the rest (80%) from an urban district. Heads of households or their spouses and female respondents constitute about 55.2 percent of the total number of respondents with 62.81 percent and 36 percent in the Greater Accra and Northern regions respectively.

The ages of respondents ranges between 15 to 99 years and the table indicate that the most represented age group in the sampled population is 35-54 (45.0%), followed by 15-34 (32.3%), 55-64 (12.9%) and those 60+ (9.6%). Those between 15 and 20 were usually single

member households and were likely to be found in an urban area. The mean age is 40.5 years and shows that all household heads fall within the economically active bracket of the population. The mean household size is 3.4 and points again to the prevalence of single headed household's especially in urban centers and the increasing nucleation of families.

Majority of the respondents were married (54.6 %) followed by those who were formally in a union either as divorcees or widowed (22.9 %) and those who had never been married (22.4 %). In reflecting the total trend, most of respondents from both the Greater Accra and Northern regions were married constituting 47.81 percent and 72.0 percent respectively. Almost an equal share of respondents in both regions had never been married with only about 5.20 percent of those in the Northern region never being married.

In terms of education, about 80 percent of the respondents have had some kind of formal education ranging from primary to tertiary levels of education with 19.6 percent not having any form of formal education. Those who completed primary education constitutes 12 percent whiles those who completed middle school or JHS constitute 33.6 percent of the sampled respondents. Respondents with secondary, vocational/technical or more education were captured together because in order to make meaningful comparisons. Those respondents formed the highest category with 34.6 percent. At the regional level, the educational level of respondents from the Greater Accra region can be said to be better than those from the Northern region. Those without any form of education in the Northern region (33.2%) were more than twice the percentage of those without education the Greater Accra region (14.3%). Interestingly, most of the respondents in the Northern region had secondary or more education (44.8%) as compared to majority of those from the Greater Accra region (41.7%, middle/JHS). However, those with middle school or more education in the Greater Accra region were more than those in the Northern region with 72 and 67 percent respectively.

The ethnic group most represented in the sampled respondents is the Ga-Adangbe group, representing 48 percent of the total number of respondents with the Mole-Dagbani group constituting the second largest category with 21 percent. The majority of respondents in each region is reflective of the major ethnic group found in that region. The Ga-Adangbe for the largest group in Greater Accra with 67.3% whiles the Mole-Dagbani form 71 percent of respondents in the Northern region.

Regarding the sector of employment, most of the respondents were employed in the informal sector (63%). This was followed by the unemployed with about 21 percent of the respondents and those employed in the formal sector constituting 15 percent. This trend is consistent with what is found in the regional distributions. Because of the cosmopolitan nature of the Greater Accra region, other ethnic groups such as the Akan (19.1%), Ewe (8.6%), Grusi, Grumma, Guan, and Kassim (3.4%) and the Mole-Dagbani (1.5%) are all represented. However, none of the respondents from the Northern region fell within the Ga-Adangbe group.

When it comes to religious affiliation, Christians formed the majority with 74 percent whiles Muslims formed 24 percent with other religions like the atheist, traditionalist and those who do not belong to any religion constituting 1 percent. On regional basis, Christian formed 96.2% and 18.8% whiles Muslims formed 2.2% and 80.8% in the Greater Accra and Northern regions respectively.

Table 5.1: Demographic characteristics of respondents

Place of Residence	G. Accra	Northern	Total Percentage
Rural	22.03	20.00	21.4
Urban	77.97	80.00	78.5
Total	**71.91**	**28.09**	**100**
Gender			
Female	62.81	36.00	55.2
Male	37.19	64.00	44.7
Total	**71.91**	**28.09**	**100**
Age			
15-34	38.28	17.20	32.3
35-54	41.09	55.20	45.0
55-64	10.16	20.00	12.9
65+	10.47	22.09	9.66
Total	**71.91**	**28.09**	**100**
Marital Status			
Never Married	22.34	22.80	22.4
Currently in union	47.81	72.00	54.6
Formerly in Union	29.84	5.20	22.9
Total	**71.91**	**28.09**	**100**
Educational Status			
No formal education	14.37	33.20	19.6
Primary	13.28	9.20	12.1
Middle/JHS	41.72	12.80	33.6
Secondary +	30.63	44.80	34.6
Total	**71.91**	**28.09**	**100**
Ethnicity			
Akan	19.06	2.40	14.3
Ga-Adangbe	67.34	0.00	48.4
Ewe	8.59	1.60	6.63
Mole-Dagbani	1.56	71.20	21.1
Grusi, Grumma, Guan, Kassim	3.44	24.80	9.44
Total	**71.91**	**28.09**	**100**
Employment			
Informal	68.59	48.80	63.0

Formal	12.66	22.00	15.2
Unemployed	18.75	29.20	21.7
Total	**71.91**	**28.09**	**100**
Religion			
Christian	96.25	18.80	74.5
Muslim	2.19	80.80	24.2
Other	1.56	0.40	1.24
Total	**71.91**	**28.09**	**100**

Source: Field data, 2018.

From table 5.2, most participants of the study utilize public health care facilities (72.0%) more than private facilities (13.0%). This is consistent with what is found in the regions, where a higher percentage of those in the Greater Accra region utilizing private facilities (16.8%) more than their Northern counterparts (5.2%).

Most of the respondents perceived their health status to be better (64.1%) than that of their peers, this is followed by those who perceived it to be similar (31.1%) with only a few reporting it to be worse (4.7%). This result mimics what is found in the Greater Accra region. Though the majority of respondents in the Northern region perceived their health status to be better than that of their peers, those who perceived it to be similar and worse reported 5.6% each.

Regarding the source of treatment when they are ill, most respondents indicated they see a medical doctor (69%). This is followed by the Chemist/Pharmacist (23.0%), self-medicate (3.8%), other sources of care (0.6%) or religious places (0.3%) like the prayer camp. The results also show that more respondents from the Northern region are likely to use traditional medicine when compared to the Southern counterparts.

Majority of the respondents indicated that they visit the hospital at least once a year (36.2%) whiles the second highest category is those who do not remember the last time they visited

the hospital. This result again seems to run across the regions. Those who visit the hospital at least once every six months are the third highest category in the total sample (15.2%) and the Greater Accra region (17.3%) but the last category in the Northern region (9.60%). Those who reported visiting the hospital once a month are the third highest category in the Northern region (18.4%) but the last category for the Greater Accra region (8.2%) and the total sampled respondents (11.1%).

With respect to the last recorded illness in the household, the table 6.2 shows that in most of the households, the last episode of illness was three months and above (36.3%). Those who don't remember the last episode of illness in their households constitute 21.3% with 15.4% reporting one within the last three months. Those who recorded an episode of illness within the past three weeks and the week prior to the study formed 6.2% and 7.9% respectively. These results mimics what is found in the two regions under study.

Most of the respondents had a valid health insurance card (52.9%) whiles 47.0% did not have any health insurance. Out of those who have health insurance, about 96.6% had the NHIS with, 2.3% having private insurance. Only 1.1% indicated having both the NHIS and private insurance. Results from the two regions confirm what is found in the total sample.

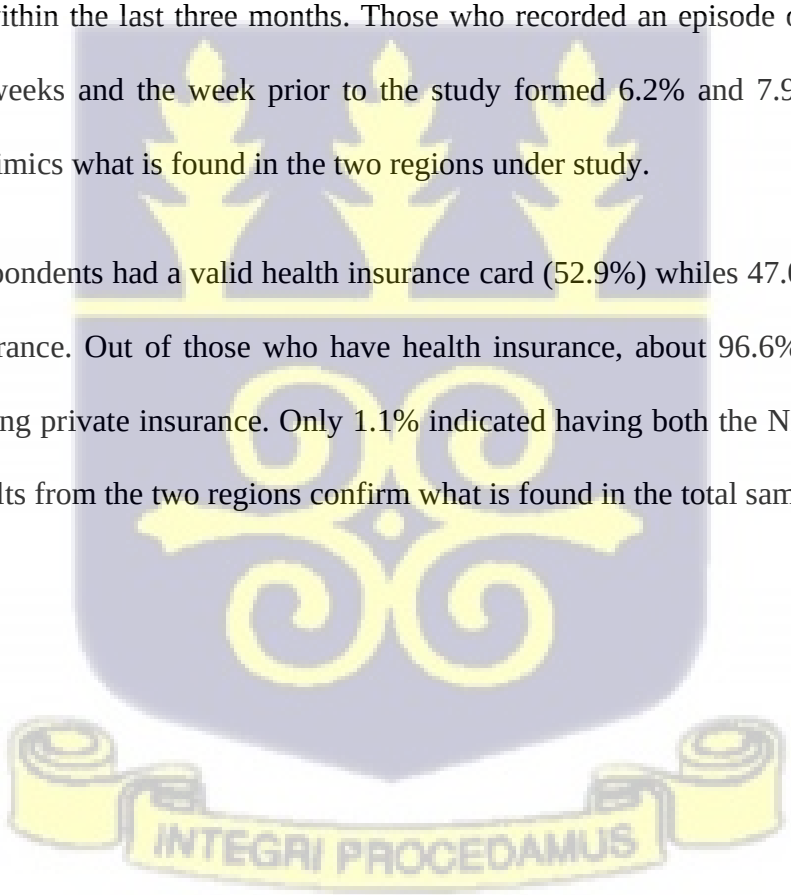


Table 5.2: Descriptive statistics for health behavior

Usual Source of Healthcare	G. Accra	Northern	Total
Public	67.34	84.00	72.02
Private	16.88	5.20	13.60
Both	15.78	10.80	14.38
Total	**71.91**	**28.09**	**100**
Reported health status			
Better	57.81	80.40	64.16
Similar	37.81	5.60	31.12
Worse	4.38	5.60	4.72
Total	**71.91**	**28.09**	**100**
Treatment when ill			
See a doctor	65.63	77.60	68.99
Chemist/Pharmacist	26.56	14.00	23.03
Traditional medicine	2.34	5.20	3.15
Self-medication	4.22	2.80	3.82
Religious Place	0.31	0.40	0.34
Other	0.94	0.00	0.67
Total	**71.91**	**28.09**	**100**
Number of Hospital visits			
At least once in a month	8.28	18.40	11.12
At least once in three months	11.56	16.80	13.03
At least once in six months	17.34	9.60	15.17
At least once in a year	36.72	34.80	36.18
Not sure/Don't remember	26.09	20.40	24.49
Total	**71.91**	**28.09**	**100**
Last recorded illness in HH			
Less than a week	6.25	12.40	7.98
Within past three weeks	5.00	9.20	6.18
Within the past one month	11.56	16.00	12.81
Within the past three months	15.31	15.60	15.39
Three months and above	40.31	26.00	36.29
Don't remember/Not sure	21.56	20.80	21.35
Total	**71.91**	**28.09**	
Do you have health insurance?			
Yes	44.22	75.20	52.92
No	55.78	24.80	47.08
Total	**71.91**	**28.09**	**100**

Source: Field data, 2018.

5.3. Amount households are willing to pay by place of residence and District

Majority of the respondents (68.2%) are willing to pay for health insurance offered through MFI's as against 31.8% who are not willing. More than 50% of respondents in all the districts are willing to pay with the highest percentage responses in La-Dadekotopon (73.5%) and West Mamprusi (72.0%). The highest percentage of those who were not willing to pay is found in Tamale Metro.

Table 5.3: Willingness to pay by district

District	Not willing	Willing	Total
La-Dadekotopon	26.45	73.55	100
Shai-Osudoku	37.59	62.41	100
Tamale Metro	42.00	58.00	100
West Mamprusi	28.00	72.00	100
Total	**31.80**	**68.20**	**100**

Chi-square test for willingness to pay with by district=18.6850 Pr (0.000)
Source: Author, 2018.

The results in Table 5.4 indicates that most represented category of those who are willing to pay, want to pay GH₵51 or more accounting for 28.4% of total responses. The highest category of those in the rural category are willing to pay between GH₵21- GH₵ 30 while the highest percentage of their urban counterparts are willing to pay GH₵51 or more for the hypothetical health insurance. This is reflected in the districts, where urban districts are willing to pay more than the rural district with La-Dadekotopon (31.6%) and Tamale metro (32.2%) willing to pay GH₵50 or more. Majority of the respondents in Shai-Osudoku are willing to pay between GH₵21- GH₵30. In West Mamprusi, those in the 1-10, 11-20 and 21-30 categories, recorded the highest percentage i.e., 19.4%. However cumulatively, the majority of the respondents were willing to pay GHS21 or more.

Table 5.4: Amount Households are willing to pay by district and place of residence

Amount (GH₵)	Rural	Urban	La-Dadekotopon	Shai-Osudoku	Tamale Metro	West Mamprusi	Total
0	0.81	2.69	2.72	0.00	2.59	2.78	2.31
1-10	8.06	4.14	3.00	3.41	7.76	19.44	4.94
11-20	12.10	4.55	5.45	9.09	1.72	19.44	6.10
21-30	26.61	12.84	12.53	29.55	13.79	19.44	15.65
31-40	21.77	25.47	25.34	25.00	25.86	13.89	24.71
41-50	16.13	18.22	19.35	18.18	14.66	11.11	17.79
51+	14.52	32.00	31.61	14.77	32.22	13.89	28.49
Total	100	100	100	100	100	100	100

Note: chi-square test for rural urban with amount=37.3808 Pr (0.000)
Chi-square test for districts with amount=74.8881 Pr (0.000)
Source: Author, 2018.

It is noted that most of the respondents recorded willingness to pay GH₵21.00 or more to an improved NHIS. This could be an indication that people are willing to pay a little more once the changes that they consider as improvement is made. Currently, the NHIS costs about GH₵25.00 on average, this depends on the area, it could be more or less. Respondents are probably willing to pay a little more to cover the cost of transportation and the inconvenience and waste of time in getting to an NHIS office to enroll on the scheme or renew their membership.

5.4 Determinants of households Willingness to participate and pay for health insurance

5.4.1 Determinants of household willingness to participate

A binary logistic regression was run to understand what factors influence respondents to say "yes" or "no" to a health insurance product using MFIs as a platform. From the estimates in Table 5.5, the determinants of willingness to pay or not to pay in the study area are attitude, perceived behavioral control, ethnicity, sex, marital status, age, education, sector of

employment, number of hospital visits, type of facility used when sick, the perception of one's health status relative to peers, source of healthcare, episode of illness and having a valid health insurance card and wealth.

The estimates indicate that attitude increases the likelihood of participation in an MFI-led health insurance by 74.7 percentage points while perceived behavioral control increases likelihood by 27.9 percentage points. Compared to the Akan ethnic group, being Ga-Adangbe, Mole-Dagbani and Grumma, Grusi, Guan and other ethnic groups reduces the likelihood of participation by 51, 96.9 and 99.2 percentage points respectively. Being female also reduces the likelihood of agreeing to pay by 42.3 percentage points while being 65+ reduces willingness to participate by 91.8%. The estimates also indicate that having primary education reduces the likelihood of willingness to participate by 89.4 percentage points.

Informal sector employment reduced the likelihood of participation by 38.1% while primary education reduced the likelihood of participation by 89.4 percentage points. Visiting the hospital at least once a month reduces the likelihood of participation by 127.8 percentage points. Using sources of treatment other than a doctor reduces the likelihood of participation by 105 percentage points. Having a valid health insurance status reduced the likelihood of participation by 48.4% while being in the poor or middle wealth categories increased participation by 55.1 and 44.4 percentage points respectively.

Table 5.5: Binary Logistic Regression on Factors that Influence participation

Variables	G. Accra	Northern	Total
Attitude	0.779***	0.898***	0.747***
	(0.142)	(0.279)	(0.116)
Perceived behavioral control	0.218	0.676**	0.279*
	(0.202)	(0.289)	(0.145)
Subjective norms	0.004	-0.183	-0.007
	(0.123)	(0.186)	(0.092)
Ethnicity (*Ref: Akan*)			
Ga-Adangbe	-0.428	-3.626**	-0.510*
	(0.276)	(1.829)	(0.263)
Ewe	-0.130	-2.111*	-0.336
	(0.445)	(1.281)	(0.408)
Mole-Dagbani	0.032	-2.236*	-0.969***
	(1.040)	(1.298)	(0.324)
Grumma, Grusi, Guan and others	-0.442	0.032	-0.992***
	(0.622)	(1.040)	(0.351)
Sex (Female)	-0.457*	-0.650*	-0.423**
	(0.238)	(0.354)	(0.180)
Age (*Ref. 15-34 years*)			
35-54 years	-0.116	0.448	-0.076
	(0.256)	(0.473)	(0.202)
55-64 years	0.471	1.700***	0.305
	(0.395)	(0.633)	(0.292)
65+ years	-0.751*	-0.159	-0.918***
	(0.386)	(0.676)	(0.307)
Married	0.877***	-0.809*	0.238
	(0.241)	(0.428)	(0.187)
Occupation (*Ref: Unemployed*)			
Informal sector	-0.236	-0.342	-0.381*
	(0.306)	(0.444)	(0.229)
Formal sector	0.028	-0.651	-0.344
	(0.416)	(0.494)	(0.290)
Household size	-0.148**	0.069	-0.008
	(0.065)	(0.068)	(0.042)
Education attainment (*Ref. No education)*			
Primary	-0.862**	-0.933	-0.894***
	(0.371)	(0.611)	(0.298)
Middle/JHS	-0.085	-1.324**	-0.244
	(0.324)	(0.583)	(0.253)
Secondary and above	0.186	-0.579	-0.087
	(0.375)	(0.430)	(0.260)
Hospital visitation (*Ref. Don't remembe*r)			
At least once a month	-2.106***	-0.047	-1.278***

	(0.473)	(0.561)	(0.332)
At least once in 3 months	-0.871**	1.725***	-0.040
	(0.427)	(0.639)	(0.333)
At least once in six months	-0.512	1.106	-0.026
	(0.408)	(0.696)	(0.318)
At least once a year	-0.431	0.923*	-0.150
	(0.313)	(0.490)	(0.242)
Treatment without doctor	-1.331***	-0.842**	-1.053***
	(0.238)	(0.425)	(0.188)
Last time HH member was sick (*Ref. Don't remember*)			
Within past one month	0.023	0.175	-0.009
	(0.367)	(0.497)	(0.274)
Within past three months	0.159	-0.388	-0.081
	(0.404)	(0.627)	(0.312)
More than three months	-0.292	-0.536	-0.338
	(0.328)	(0.547)	(0.257)
Have health insurance	-0.217	-1.280***	-0.484**
	(0.235)	(0.449)	(0.189)
Wealth Index (*Ref: Poorest*)			
Poor	0.496	0.375	0.551**
	(0.305)	(0.619)	(0.255)
Middle	0.226	0.673	0.444*
	(0.323)	(0.598)	(0.265)
Rich	-0.035	0.284	0.171
	(0.328)	(0.599)	(0.267)
Richest	0.373	-0.124	0.121
	(0.411)	(0.527)	(0.278)
Constant	-0.890	-1.646	-1.118
	(0.973)	(1.810)	(0.728)
Observations	640	250	890

Note: Standard errors in parentheses, and ***, **, and * represent statistical significance at the 1%, 5%, and
10% respectively. Wtp is a binary outcome (1=willing to pay, 0=not willing to pay)
Source: Author, 2018.

From the estimates in table 5.5 for Greater Accra region, it is seen that, attitude, age, marital status, household size, education, frequency of hospital visits and source of treatment influenced the decision to participate in a MFI-led health insurance. Attitude increases the

likelihood of willingness to participate by 77.9%. Being a female reduces likelihood of participation by 45.7 percentage points whiles being in a marital union increases willingness to participate by 87.7 percentage points relative to those in no union. Those in the age category 65+ were also less likely to participate by 75.1%.

A unit increase in household size decreases the likelihood of willingness to participate by 14.8 percentage points. Having primary education relative to those without education reduced the likelihood of participation by 86.2%. Frequenting a health facility at least once a month and one in three months reduced likelihood of participation by 210 and 87 percentage points respectively. Receiving treatment from sources other than medical personnel reduces likelihood of participation by 133 percentage points.

From estimates in Table 5.5 for the Northern region, attitude, perceived behavioral control, ethnicity, gender, age, education, frequency of hospital visits, source of treatment and health insurance status influenced participation. Likelihood of participation increased by attitude and perceived behavioral control by 89.9 and 67.6 percentage points respectively whiles being Ga-Adangbe, Ewe and Mole-Dagbani reduced likelihood of participation by 362.6, 211.1 and 223.6 percentage points respectively. Female respondents were 65% less likely to participate. Being in the age category 55-64 years increased likelihood to participate by 170 percentage points whiles being married reduced the likelihood of participation by 80.9 percentage points. Having middle/JHS education surprisingly reduce willingness to participate by 132 percentage points. The frequency of visit to the hospital increases the likelihood of participation by 172.5 and 92.3 percentage points for at least once a month and at least once a year respectively. Seeking health care somewhere other than with a doctor reduces willingness to pay by 84.2% whiles having a valid health insurance status reduced likelihood of participation by 128 percentage points.

5.4.2 Determinants of household WTP for health insurance through MFI's

Table 5.6 presents a tobit regression model on the factors that influences households to pay for health insurance through MFIs. The results from the estimation indicate that subjective norms, ethnicity, age, household size, source of treatment, last episode of illness in the household and wealth are the significant determinants of willingness to pay for the entire study area.

The variable subjective norm has a positive relationship with household willingness to pay and statistically significant at 1%. Being in the Ga-Adangbe and Mole-Dagbani ethnic categories has a negative relationship with willingness to pay but statistically significant at 1% and 5% respectively. The age category 35-54 has a negative but significant relationship with willingness to pay at 5%. The variable household size is negative and statistically significant at 5%. As expected, seeking care from sources other than a doctor has a negative relationship with willingness to pay and statistically significant at 1%. The last episode of illness within the past three months has a negative but significant relation with willingness to pay at 5%. Being in the rich and richest wealth quintile unsurprisingly has a positive and statistically significant relation with willingness to pay at 10% and 1% respectively.

Table 5.6: Tobit regression estimates for Willingness to Pay by region and combined

Variables	G. Accra	Northern	Combined
Attitude	3.989	0.888	1.015
	(6.804)	(4.807)	(5.083)
Perceived behavioral control	-1.135	2.111	-0.843
	(9.045)	(5.436)	(6.503)
Subjective norms	11.582**	6.330**	10.366***
	(4.812)	(2.983)	(3.532)
Ethnicity (*Ref: Akan*)			
Ga-Adangbe	-30.450***	-22.380	-30.541***
	(10.931)	(37.522)	(9.515)
Ewe	-23.503	-9.632	-20.688
	(17.109)	(15.647)	(14.896)
Mole-Dagbani	-4.647	-10.110	-26.816**
	(34.607)	(16.327)	(12.626)
Grumma, Grusi, Guan and others	-31.035	-4.647	-18.420
	(25.112)	(34.607)	(14.321)
Female	-8.198	-0.048	-9.196
	(9.913)	(6.176)	(7.309)
Age (*Ref. 15-34 years*)			
35-54 years	-24.556**	9.811	-17.928**
	(10.352)	(8.662)	(8.066)
55-64 years	-26.768*	17.891*	-13.305
	(15.348)	(10.492)	(11.257)
65+ years	-33.718*	9.832	-20.400
	(18.440)	(13.426)	(13.938)
Married	9.063	1.761	6.332
	(9.908)	(7.564)	(7.485)
Occupation (*Ref: Unemployed*)			
Informal sector	14.782	-10.070	9.576
	(12.246)	(8.366)	(9.136)
Formal sector	8.607	-13.966	8.356
	(16.744)	(10.048)	(12.049)
Household size	-4.361	-3.064***	-3.494**
	(2.808)	(1.001)	(1.696)
Education attainment (*Ref. No education)*			
Primary	-0.912	-9.999	-1.227
	(18.212)	(10.322)	(13.194)
Middle/JHS	3.221	-14.361	5.219
	(14.514)	(10.223)	(10.544)
Secondary and above	-8.948	0.332	-2.201
	(15.923)	(7.731)	(10.996)
Hospital visitation (*Ref. Don't remembe*r)			
At least once a month	21.783	6.772	4.872
	(23.362)	(11.364)	(15.672)

At least once in 3 months	12.179	20.377*	6.589
	(18.075)	(11.163)	(13.459)
At least once in six months	-3.075	24.466*	-3.258
	(15.920)	(13.662)	(12.463)
At least once a year	-9.304	12.207	-6.398
	(13.056)	(9.613)	(10.212)
Treatment without doctor	-33.225***	1.663	-27.182***
	(11.007)	(8.895)	(8.509)
Last time HH member was sick (*Ref. Don't remember*)			
Within past one month	-12.849	-15.749	-8.969
	(15.622)	(9.705)	(11.541)
Within past three months	-32.458**	-29.286**	-26.409**
	(16.218)	(11.442)	(12.464)
More than three months	-14.048	-34.255***	-13.907
	(13.480)	(10.414)	(10.476)
Have health insurance	-13.468	6.208	-9.188
	(9.513)	(8.008)	(7.316)
Wealth Index (*Ref: Poorest*)			
Poor	11.908	14.979	13.032
	(14.114)	(10.283)	(10.960)
Middle	8.424	15.735	10.351
	(14.379)	(10.810)	(11.132)
Rich	18.720	17.604	20.147*
	(15.031)	(10.970)	(11.544)
Richest	41.727**	30.224***	37.292***
	(17.066)	(9.440)	(12.005)
Constant	64.832	19.777	66.922**
	(44.099)	(28.799)	(31.817)
Observations	455	152	607

Parentheses, and ***, **, and * represent statistical significance at the 1%, 5%, and 10% respectively. **Note**: Standard errors in wtp_amt is a continuous variable referring to amount respondents are willing to pay.

Source: Author, 2018

The main determinants of WTP in the Greater Accra region are subjective norms, ethnicity, age, source of treatment, last episode of illness in the household and wealth. Subjective norm is positive and statistically significant at 5% while being a Ga-Adangbe is negative and statistically significant at 1%. Being in the 35-54 age category has a negative but significant relationship to willingness to pay at 5%. Seeking treatment from sources other than a doctor

is negative and statistically significant at 1%. If the last episode of illness in the household was within the past three months, it had a negative but significant relation with willingness to pay at 5%. Being in the richest wealth quintile was positive and statistically significant at 5%.

In the Northern region, the main drivers of WTP are subjective norms, age, household size, hospital visitation, last episode of illness in household and wealth. Subjective norm is positive and significant at 5% while being in the 55-64 age category is also positive and significant at 10%. Household size has a negative but significant relationship with willingness to pay at 1%. Visiting the hospital at least once in three months and once in six months are both positive and statistically significant at 10%. The last episode of illness in the household "within the past three months" and "more than three months" are both negative and statistically significant at 5% and 1% respectively. Being in the richest wealth category is also positive and statistically significant at 1%.

The results from the estimations in Table 5.6 indicate that perceived social pressure increases willingness to pay for health insurance through MFI's by GH₵11.58 in Greater Accra, GH₵6.33 in the Northern region and GH₵10.36 in the entire study area. Ethnicity that is, being in the Ga-Adangbe group reduced willingness to pay by GH₵30.45 in Greater Accra and GH₵ 30.54 in the entire study area. The same effect is observed in the entire study where being in the Mole-Dagbani group reduced willingness to pay by GH₵26.81.

With reference to age, the study found that being in the age bracket 35-54, reduced willingness to pay in the Greater Accra and the entire study area by GH₵24.55 and GH₵17.92 respectively. Also, being in the age bracket 55-64 reduced WTP by GH₵26.76 in the Greater Accra region but increased WTP by GH₵17.89 in the Northern region while being in the age category 65+ reduced WTP by GH₵33.71 in only the Greater Accra region.

Household size reduced willingness to pay by GH₵3.06 in the Northern region and by GH₵3.49 in the study area. If the frequency of visit to the hospital is "at least once in three months" and "at least once in six months", increased willingness to pay by GH₵20.37 and GH₵24.36 respectively in the Northern region. It however had no effect in the Greater Accra region and the entire study area. Seeking treatment from other health care providers other than a doctor reduced WTP in the Greater Accra region by GH₵33.22 and in the entire study by GH₵27.18. Being in the rich wealth category increased WTP in the entire study by GH₵20.14 while being in the richest category increased WTP across the two regions and the entire study. Respondents in the richest wealth category are willing to pay GH₵41.72 more in Greater Accra, 3 GH₵0.22 more in the Northern region and GH₵37.29 more in the entire study.

5.5 Households Health insurance Intention and Behavior

Behavioral intention refers to the factors that motivate someone to engage in a behavior. The stronger the behavioral intention, the more likely it is to actually perform that behavior. Table 5.7 presents results on the behavioral intention of households towards health insurance among the districts studied. The chi-square test gave values of 86.83 for regular renewal of premium; 45.13 for knowledge of benefit package when in a facility; 49.90 for knowledge on where to ask for help when experiencing challenges; 106.8 for plans to renew subscription every year and 102.48 for plans to enroll household members. The relationship between the total behavioral intention and locality has a chi-square value of 75.67. These chi-square tests (Table 6.3) are all statistically significant at 1%. The tests show significant differences and explain the observed differences between the health insurance intention and behavior of households with the district of residence.

Table 5.7: Households health insurance Intention and behavior by District

Response	La-dadekotopon	Shai-Osudoku	Tamale Metro	West Mamprusi	Total
I regularly renew my premium					
1 (Strongly Disagree)	18.24	17.02	9.00	16.00	15.84
2 (Disagree)	24.65	29.08	9.00	20.00	21.57
3 (Neutral)	9.62	6.38	4.00	2.00	7.42
4 (Agree)	27.86	27.66	29.00	26.00	27.98
5 (Strongly Agree)	19.64	19.86	49.00	36.00	27.19
Total	100.00	100.00	100.00	100.00	100.0
Note: Chi-square test=86.8352; Pr (0.00)					
I know my benefit package when I visit a health facility					
1 (Strongly Disagree)	12.83	15.60	6.00	14.00	11.80
2 (Disagree)	30.86	38.30	17.00	20.00	28.31
3 (Neutral)	11.02	7.09	13.50	12.00	11.01
4 (Agree)	31.86	24.82	42.50	28.00	32.92
5 (Strongly Agree)	13.43	14.18	21.00	26.00	15.96
Total	100.00	100.00	100.00	100.00	100.00
Note: Chi-square test=45.1363; Pr (0.000)					
I know where to go for help if am experiencing challenges					
1 (Strongly Disagree)	8.62	4.96	7.00	12.00	7.87
2 (Disagree)	16.23	23.40	9.50	28.00	16.52
3 (Neutral)	11.42	10.64	4.50	12.00	9.78
4 (Agree)	50.10	43.97	49.50	28.00	47.75
5 (Strongly Agree)	13.63	17.02	29.50	20.00	18.09
Total	100.00	100.00	100.00	100.00	100.00
Note: Chi-square test=49.9002; Pr (0.000)					
I plan to renew my subscription every year as long as am satisfied with the services offered					
1 (Strongly Disagree)	10.42	7.09	5.50	6.00	8.54
2 (Disagree)	17.23	23.40	1.50	4.00	13.93
3 (Neutral)	10.82	6.38	4.50	2.00	8.20
4 (Agree)	45.49	45.39	46.0	44.00	45.51
5 (Strongly Agree)	16.03	17.73	42.50	44.00	23.82
Total	100	100	100	100	100
Note: Chi-square test=106.8811; Pr (0.000)					
I plan to enroll all my household members					
1 (Strongly Disagree)	5.01	3.55	2.50	2.00	4.04
2 (Disagree)	13.43	10.64	1.00	0.00	9.44
3 (Neutral)	14.03	14.18	6.00	4.00	11.69
4 (Agree)	51.30	51.77	48.00	40.00	50.00
5 (Strongly Agree)	16.23	19.86	42.50	54.00	24.83

Total	100	100	100	100	100
Note: Chi-square test=102.4803; Pr (0.000)					
Total Behavioral Intention					
1 (Strongly Disagree)	6.21	4.26	1.00	0.00	4.38
2 (Disagree)	14.43	17.02	5.50	6.00	12.36
3 (Neutral)	31.66	35.46	16.50	38.00	29.21
4 (Agree)	36.7	32.62	50.00	42.00	39.44
5 (Strongly Agree)	10.82	10.64	27.00	14.00	14.61
Total	100	100	100	100	100
Note: Chi-square test=75.6761; Pr (0.000)					

Source: Field data, 2018

Table 5.7 also reveals that most of the respondents agreed (27.9%) and strongly agreed (27.1%) that they renew their premium regularly. More than half of respondents from Tamale Metro strongly agreed (49.0%) and agreed (29.0%) that they renew their premium regularly. This result is also observed in the West Mamprusi district where 36% strongly agreed and 26% agreed to the statement. The agreement seems to also be strong in La-Dadekotopon (27.8%) and Shai-Osudoku (27.6%) however, majority of those in Shai-Osudoku disagreed (29.0%) they renew their premiums regularly. This is compared to 24.6%, 20.0% and 9.0% for La-Dadekotopon, West Mamprusi and Tamale Metro respectively.

Most of the respondents agreed (32.9%) to the statement ‘’I know my benefit package when I visit a health facility” whiles 28.3% of respondents disagreed to the statement. Majority of the respondents in La-Dadekotopon, Tamale Metro and West Mamprusi agreed to the statement with 31.8%, 42.5% and 28.0% respectively whiles majority of those in Shai-Osudoku disagreed (38.3%) to the statement. Though majority of the respondents in La-Dadekotopon agree that they know the benefit package they have subscribed to, an almost equal percentage (30%) also disagreed.

The result also shows that 45.2 percent of respondents agree they know where to ask for help if they experience any challenges. Knowledge of where to seek help when experiencing challenges seems to be stronger in La-Dadekotopon and Tamale metro though majority of the respondents from the other districts also agree to the statement. About 50 percent of the population from La-Dadekotopon agreed to the statement whiles 49.5% of those in Tamale Metro also agreed to the statement. Equal numbers of respondents who agreed to this statement also disagreed to it in the West Mamprusi district with 28%.

With regards to the intention to renew, majority (45.5%) of the respondents agreed they plan to renew their subscription once they were satisfied with the services offered to them, this is followed by those strongly agreed (23.8%), disagreed (13.9%), strongly disagreed (8.5%) and those who were neutral (8.2%). Majority of the respondents from each district indicated their agreement to the statement but agreement seems strongest between Tamale Metro and West Mamprusi and had high scores for both strongly agree and agree. Even though most respondents in the Shai-Osudoku district agree (45.3%) they plan to renew their subscription, the highest percentage of those who disagreed (23%) with the statement could also be found in that district.

About 50 percent of the respondents agreed to the statement "I plan to enroll all my household members". Majority of respondents in the Shai-Osudoku district (51.7%) followed by La-Dadekotopon (51.3%) and Tamale Metro (48%) agreeing to the statement whiles most of those in West Mamprusi (54%) strongly agreed to enroll all their household members.

From Table 6.3, most of respondents agree to all the statements that were posed to them. This could be an indication that the respondents generally have a favorable intention and behavior towards health insurance. Almost an equal number of respondents agreed and disagreed to knowing the benefit package they are entitled to probably because of issues of co-payments

that is observed in some health institutions across the country, showing an inconsistency in what the people have been told they are entitled to and their experiences. Interestingly, no respondent in West Mamprusi and only 1 percent of those in Tamale Metro disagreed to the statement "I plan to enroll all my household members". Majority rather strongly agreed or agreed to it probably because they are found in the North of Ghana where households tend to be larger and so it is more likely that the economic burden of diseases should also be higher on such households. Having a health insurance coverage, it is assumed can lessen this economic burden by reducing the households' health related expenditure.

5.6 Discussion

5.6.1 Perception of health status, health service and other insurance related determinants

The positive effect of frequency of hospital visit in the Northern region and the entire study area on behavioral intentions may be an indication that higher utilization of health facilities using the health insurance probably increases the value of the scheme to the beneficiaries. On the other hand, it could be that those who frequent the hospital whiles paying cash may develop a better intention towards health insurance because of the financial implications of frequenting the hospital when ill.

The use of alternative healthcare provider's such as traditional healers has a negative effect on behavioral intention towards health insurance probably because the health care providers of those respondents do not require NHIS to serve them. Also, it could be because they feel their illness is not something to be dealt with by a medical health professional. A number of respondents used the services of pharmacist/drug stores corroborating that of Taber et al (2015) who found that one of the reasons why some people did not make it to health facilities when ill is because they felt their symptoms would go away after a while by taking some over

the counter medication. Kahissey et al (2017) study on why people avoid medical care found that people mentioned the supernatural cause of illness. This may therefore not require biomedical attention. It has also been reported that the settings and mode of operations of these alternative healthcare providers appeals to the local people who feel more comfortable with the environment and way of delivery than the formal health facilities. For instance, studies found that pregnant women preferred the use of TBA's because they were allowed to feel free and could also access their services on credit (Allou, 2018).

It makes sense that having a valid health insurance status has a positive influence on behavioral intention. This is because they are likely to have been well informed on the value of the insurance cover even before they subscribed to it. Also, their personal experiences may also have influenced their behavioral intention towards insurance. Wealthier households have a positive behavioral intention towards health insurance. Higher wealth is associated with better education and higher incomes, which may lead to a better understanding of insurance and therefore influence behavioral intentions.

5.6.2 Determinants of willingness to Pay

The average amount respondents in this study are willing to pay for health insurance per adult head is GH₵40.00, the equivalent of USD6.87. This amount is higher than the amount that currently pertains for the NHIS, which on average is GH₵25.00. This amount is also higher than what has been found in other studies like Jofre-Bonet and Kamara (2018) in Sierra Leone, but less than Khan and Ahmed (2013) in Bangladesh. Jofre-Boent and Kamara's (2018) study found that respondents were willing to pay the equivalent of USD 3.7 for health insurance whiles Khan and Ahmed recorded USD 15.2 as the WTP of respondents. Considering that several studies in Ghana have mentioned poverty as the reason for none enrollment, this study seems to suggest otherwise. Arguments have been made that poorer

households spend quite a lot of their available income on health-related issues and so are willing to pay provided they have the assurance that the insurance purchased will protect them against catastrophic health expenditures when the need arises (Kavosi et al, 2012, Nostranejad, Rashidian & Dror; 2016). If that is the case, then this result is encouraging and suggests that premiums can be adjusted upwards once the mode of payment suits the respondents. The implication is that there will be an improvement in the resources mobilized from premium to finance health thereby increasing the financial risk protection objective of the NHIS.

Variations can however be observed between rural and urban settings. Rural communities usually have low willingness to pay because they may have a limited understanding of the value and workings of insurance and may also have lower socio-economic status when compared to their urban counterparts (Nostranejad et al., 2016). The low socio-economic status of rural households is generally because of their over reliance on subsistence agriculture and petty trading (Ogundeji et al, 2019). Ignorance and illiteracy could also explain the low willingness to pay usually reported for rural settings (Onwujekwe et al, 2010). This calls attention to the fact that a general premium cannot be set for the entire population otherwise some segments of the population may be excluded from accessing health care (Jain et al, 2013). The results confirm what Onwujekwe et al (2010) and Ogundeji et al (2019) found in Nigeria that urban communities were willing to pay higher premiums than rural communities.

The study reveals that the influence of close family members and peers on willingness to pay is important. This could be because the account given by our social connections of their positive or negative experiences in paying for and using health insurance could serve as a reference point for our own behavior. A study conducted by Chemin (2018) to understand the

low uptake of health insurance reflects this point. In that study, Chemin (2018) found that the recommendation of a community leader and the influence of peers led to the adoption of insurance by late adopters. They attributed this effect to imitation of social connections and peer pressure, which led to social learning.

Ethnicity was found to be another factor that reduces willingness to pay in this study. The Ga-Adangbe and the Mole-Dagbani are the major indigenous ethnic groups in the Greater Accra and Northern regions respectively. Both ethnic groups had negative willingness to pay. Culturally driven practices may influence the way some people look at certain practices pertaining to their health care. This could however be intermediated by several other factors like the level of risk aversion, access to information, educational level of most of the people from that ethnic group or even where most of them are located, whether rural or urban. This is consistent with work done by Shafie and Hassali (2013) who found that in a multi ethnic country like Malaysia, the Chinese were still willing to pay more for health insurance than any other ethnic group even after adjustments had been made for income. They attributed this to the risk averse nature of the Chinese relative to the others.

Interestingly, those in the age category 35-54 are not willing to pay a high premium. This category forms the bulk of the active labor force and is generally active both physically and economically. As a result, they may feel that they have the resources to pay for the health care needs of their household when the need arises. It could also be because of the perception that they are strong and active and so may not need health insurance. It is again interesting to observe that those within the category 65+ are not willing to pay high premiums in the Greater Accra region. Considering the fact that increasing age (65+) is associated with many ailments, the expectation of the study was that older persons would be willing to pay and pay more especially because of the prevalence of non-communicable diseases in that age

category. It is therefore surprising to find that increasing age reduces willingness to pay. This is perhaps because older persons may feel that the NHIS for instance does not cover most of their needs or drugs such as medications for hypertension and diabetes, cardiovascular problems, eye care etc. Older people may also be more conservative and so are not ready to try new schemes or systems or have the financial capacity to purchase insurance no matter how subsidized it is (Nostranejad et al., 2016 and Babatunde et al, 2012). Another explanation could be that they feel that they can depend on their children and other relatives to care for them when they become ill. This study contradicts Entele and Emodi's (2016) study in Ethiopia on Willingness to pay and its implications for health financing". The study found that older persons are willing to pay for health insurance because they are more vulnerable to health issues and so feel they need health insurance to protect them.

A higher household size has been found in some studies (Minyihun et al, 2019; Djahini-Afawoubo & Atake, 2018; Nostranejad et al., 2016 and Babatunde et al, 2012) to increase willingness to pay. Such studies asserted that frequency of episodes of illness in larger households, which can lead to a drain on the household's resources, makes such households much more willing to subscribe to an insurance cover, which will reduce the effect of catastrophic health expenditure. But contrary to these studies, this study found that increasing household size rather reduces the willingness to pay. This study confirms studies (Jehu-Appiah, 2011; Onwujekwe et al, 2010) in Burkina Fasso, Nigeria and Ghana respectively, who found that larger households were less willing to pay for health insurance. Larger households in this study are not willing to pay perhaps because enrolling all family members could put a greater financial burden on the family even if cost per child for instance may be small. It could also be that larger households are also poorer households explaining the unwillingness to pay.

When people visit a health facility frequently, it puts them in a better position to judge the care that is offered under the health insurance cover that they have subscribed to. In this study, visiting the hospital at least once in three months and at least once in six months increases willingness to pay in the Northern region. This result can be attributed to the recognition that health insurance can lessen the financial burden of ill health on their household. Northern households are usually poorer and have larger households (Cooke et al, 2016) and so may appreciate the contribution that having a health insurance cover has on the total cost of treatment when ill.

The availability and accessibility of alternative medical sources especially in Africa means that people get to choose where to seek care depending on the severity of illness, the resources available, the time frame and the perception of the source of the illness (Aikins, 2005). From this study, though most respondents use the services of a doctor when ill, those who do not, utilize the services of pharmacist, herbalist and spiritualist when they are unwell. Such people are less likely to accede to biomedical remedies for their day-to-day illnesses except for specialized help or surgery. As a result, they may not be willing to pay because these alternative health providers do not require health insurance to access health care.

Those who have had an episode of illness in the family within the past three months were not willing to pay for health insurance. The possible explanation is that their recent experience of using health insurance in a health facility was not positive, affecting their willingness to pay. Findings by Minyihun et al (2019) in Northeast Ethiopia contradict this study. They found that individuals who were sick within the last three months had a positive effect on willingness to pay. The study attributed this to the fact that risk averse individuals are likely to enroll on a health insurance scheme.

A higher income enables a household to purchase more health insurance than poorer households (Nostranejad et al., 2016). This study finds wealth as a determining factor, where the higher one's wealth the more willing they are to pay for health insurance. The possible explanation is that total cost of the insurance at the end of the day does not have much effect on their available income thereby increasing their consumption of insurance. It could also be the case that, wealthier families have more to lose if there is catastrophic health expenditure in the household (Minyihun et al, 2019). This is similar to studies in Nigeria (Onwujekwe et al, 2010; Babatunde et al, 2012; Oriakhi, Onemolease and Amla, 2012); Cameroan (Naubiap et al, 2013) and Ethiopia (Kebede et al, 2014 and Minyihun et al, 2019). The implication is that the proposed health insurance may end up serving the medium to upper class excluding those who may really need the services but cannot afford to pay the premium.

5.6.3 Determinates of behavioral intention towards health insurance

The purpose of this chapter was to determine the factors that affect willingness to pay for health insurance through MFI's. The analysis used here is unique in its integration of the theory of planned behavior to evaluate the determinants of people's behavioral intention and willingness to pay for health insurance. Though the objective was purposely to ascertain WTP it was also important to examine willingness to participate and people's general behavioral intentions towards health insurance. The behavioral intention towards the NHIS is important because it will indicate whether people will remain with the proposed scheme or abandon it. The analysis of the determinants of willingness to pay is important to the proposed health insurance product because a poorly priced product can jeopardize the investment that has been made in the development of that health insurance product.

A positive attitude is generally assumed to lead to a favorable intention towards the performance of a behavior (Tam, 2021). With a good attitude towards health insurance, one is

more likely to be more informed about how health insurance works and so appreciate its value and benefits. Once a person perceives that he/she has control over the decision to take up insurance, they are likely to be willing to participate and pay (Liebe et al, 2011). Perceived control in terms of the resources to purchase insurance and in terms of the ability to independently make decisions concerning one's insurance status affects behavioral intention. Increasing pressure from peers and social connections also has the potential to influence behavior (Brahmane et al, 2018). The fear of being penalized by family and friends for not conforming in the event of an unforeseen illness may serve as an incentive to participate and pay. This speaks to work done by Liebe et al. (2011), who found that the likelihood of willing to pay for public environmental goods is increased when there is a positive attitude, increased perceived behavioral control and increased subjective norm confirming Ajzen (1991). Findings in this study confirm to some extent, what was found by Dzulikipli et al, (2017). In their investigation of the influence of Theory of Planned Behavior (TPB) and the intention to buy medical health insurance, Dzulikipli et al, (2017) found that attitude and subjective norms were among the variables that highly predict intention to purchase insurance whiles perceived behavioral control had a weak effect on intention to purchase medical insurance. This study found attitude and perceived behavioral control having a stronger influence on behavioral intention than subjective norms, which only had an influence in the Greater Accra region.

Spatial differences are observed between the North and the South and even within the two geographical areas. Households in the Northern region have a stronger behavioral intention towards health insurance than those in the Greater Accra region probably because they face more health challenges than their Southern counterparts because of issues of proximity/availability of health facilities and ability to pay. Populations in the Northern region of Ghana are poorer and access to quality health care services may also be inadequate

(Atuahene, 2019; Cooke, 2016). This may increase the value they place on access to health care, leading to a better behavioral intention. Even within the Northern region, Tamale Metro has a stronger behavioral intention than West Mamprusi. This could also be because populations in Tamale metro are wealthier than those in West Mamprusi and could explain why attitude is stronger in West Mamprusi with a stronger PBC in Tamale Metro. This confirms Kumi-Kyeremi and Amo-Adjei's (2013) observation of pronounced spatial differences in health insurance subscription between the poor and the rich in Northern Ghana. However, those in the North were more likely to be insured than those in southern Ghana.

Demographic differences among individuals affect their behavioral intentions. Though ethnicity did not have any effect on behavioral intention over all, this study found that respondents from the Ga-Adangbe group had a lower behavioral intention towards health insurance relative to the Akans. Most of the respondents from the Ga-Adangbe group were found in the La-Dadekotopon district, an urban district. Thus, the urban influence of having a variety of private health insurance packages to choose from aside the NHIS, may affect how they view the NHIS generally and influence their perception of the nature of services received under the NHIS. This skeptism may ultimately also influence their behavioral intention towards taking up the NHIS even if it is an improved one. Amo-Adjei et al (2016) found that urban dwellers are more likely to have a bad perception of quality under NHIS while subscribers from the Northern region had a better perception. The study attributed this to the fact that urban dwellers had a variety of health facilities both higher and lower to choose from and so could easily compare and demand more from providers unlike those in the north.

Exploring the differences in gender and age and its effect on behavioral intention is important because these differences mean differences in health conditions and decision-making

abilities. Females have a negative behavioral intention probably because they lack the power both financially and in terms of decision-making. There is a positive behavioral intention towards health insurance in the Greater Accra region by the age category 65+ probably because older people suffer more health challenges and therefore see health insurance as a huge benefit especially because their incomes could be lower at this stage in their lives. The perceived usefulness of health insurance will therefore influence behavioral intention to purchase health insurance (Brahmana et al, 2018).

From the perspective of sector of employment, formal sector employees have a positive behavioral intention in Greater Accra region but a negative behavioral intention in the Northern region. This could be because household incomes are generally higher in the Greater Accra region relative to the Northern region, which may affect the ability to purchase insurance and therefore affect the behavioral intention. Also, information on health insurance may be more available and accessible to households in the Greater Accra region considering that all the headquarters of health insurance companies are in the Greater Accra region and may equally influence behavioral intention towards health insurance.

Larger households may have a better behavioral intention because they tend to lose more with multiple episodes of illness in the household or through catastrophic health expenditure. Education equally has a positive effect on the behavioral intentions of people. Overall, only primary education had a significant effect on behavioral intention but education beyond primary level in the North has a positive effect on behavioral intention. More education means better access to information and a better understanding of the role and necessity of health insurance schemes. Ioncica et al (2012) in their study of the role of education on consumer behavior in the health insurance market arrived at the same conclusion.

5.7 Conclusion

This study has shown that there is generally a positive behavioral intention towards health insurance however; this does not always lead to willingness to pay. Whiles most people are willing to pay between GH₵ 27.50 to GH₵45.00 for health insurance in order to enjoy some improvements in service delivery, differences in population characteristics such as geographical location may affect the limit households are willing to pay. This difference in population characteristics means that it will be challenging to set a flat rate or single premium rate for all households. In other words, while setting a premium that is too high for a large proportion of the population may exclude a lot of people, setting a premium that is too low for majority of the population will also reduce the resources pooled for effective health financing. This provides an opportunity for further research on the solutions that can be adopted in place of flat premium payment for the NHIS.

CHAPTER SIX

THE ROLE THAT MICROFINANCE INSTITUTIONS CAN PLAY IN HEALTH FINANCING

6.1 Introduction

According to Kutzin et al (2017), the structure of any health financing system consists of the financing schemes and the institutional units. The main themes that emerged from the data and discussed in this section are: the major actors in Ghana's health financing space and the role they play, the role that MFIs are already playing in health financing; how MFIs can play a role in the health financing space and the success factors to a collaboration between government and MFIs.

6.2 Actors in Ghana's health financing space

The major actors in Ghana's health financing space identified by the study can be grouped into the following four categories: the government of Ghana, development partners, non-state actors and households. The Government of Ghana here comprises mainly, the Ministry of Health and the Ministry of Finance and other government sector subsidiaries that work together with these ministries. Under Non-state actors we have, Civil Society Organizations, the Christian Health Association of Ghana (CHAG), Non-Governmental Organizations in Health as well as the private sector.

Actors in the health financing space according to McCoy, Chand and Sridhar (2009), play three major roles, they serve as "providers", "managers" or "spenders". As "providers", they generate resources for the sector, as "managers", they gather funds from various sources and put in place mechanisms to dispense these resources appropriately. "Spenders" directly use resources to purchase and use health goods and services. Some actors may play a specific role

at a time while others play various roles simultaneously. The next section discusses the major actors, their role and how they manage the health financing space available to them.

6.2.1 The Government of Ghana

Based on the key informant in-depth interviews with MOH and NHIA officials and the literature reviewed, the study found that the Government of Ghana, is the major contributor and actor in the health financing space. As the major actor, government provides funds for the health sector, manages these funds and also provides health goods and services for the populace. Thus, they play the multiple roles of providers, managers as well as spenders. Different agencies under the GoG may however be placed to play specific roles.

The Ministry of Health is the overall advisory and supervisory authority in health matters but when it comes to issues of financing, this oversight responsibility is shared with the Ministry of Finance (MoF). The Ministry of Finance and Economic Planning executes the budgetary requirements whiles the Ministry of Health in turn uses the money to execute the health sector budget. The role of the Ministry of Health with respect to health financing is to mobilize resources from both domestic and international sources and to distribute these resources equitably among the various deliverers of health care services in the country. Domestic resources are mainly drawn from direct and indirect taxation, non-tax revenues, premiums and out-of-pocket payments and investments whiles, international resources are mainly from donors or development partners. The resources are collected into two funds that is the Health Fund and the National Health Insurance Fund.

Health facilities submit their budgets to the Ghana Health Service who in turn submit theirs to the Ministry of Health. The Ministry of health's budget is a consolidation of all health sector budgets and is submitted to the Ministry of Finance. Budgets at the district and facility levels must be approved by the Ministry of Health before funds are released for the execution

of planned activities '*If an item is not covered in the budget, you cannot spend on it'* (Key informant interview, MOH, 2019).

The government manages the health financing policy dialogue space and so holds much of the power in that space. They decide the policy direction, what issues to consider and what not to consider on health financing policy debates as well as the actors or stakeholders to be engaged on these policy issues. Actors who are perceived to be "problematic" are excluded or given limited space to operate or contribute to the process whiles those who are perceived to tow the governments' line are given a much bigger room and platform to operate. This affects the engagement process and influences how stakeholders respond to certain issues raised. According to a key informant:

> "*But I think one other thing, which we keep discussing is the presence of political pressure groups who brand themselves as civil society activist. They take up the space quiet easily…. So, you go to these meetings and sometimes the people they call to speak on behalf of Civil Society Organizations are these face''* (KII, CSO, 2019).

The implication of this according to a key informant is:

> "*fueling suspicion between the ruling government and Civil Society. So however well-meaning you are the politicians you are trying to engage might lump you together with his opponents, masquerading under the banner of civil society and might either not listen to you or take a confrontational attitude towards you*" (KII, CSO, 2019).

6.2.1.1 Challenges Government faces in the health financing space

The major challenge the Government faces, as the main financier of the health sector is the inability to mobilize enough resources for the sector. The low fiscal space, the inability to find innovative ways of raising revenue and the dwindling donor contributions means the government is constrained in making major financial contributions and adjustments to the health sector. The low fiscal space means that though some increment in government expenditure on the health sector can be expected, it may be insignificant in the long-run

(Scheiber et al, 2013). One of the criticisms against the Ministry of Health is that it is not able to communicate the linkage between the health sector and the economy of Ghana effectively to the Ministry of Finance. As a result of their inability to make a case for higher investments into the health sector, they are not able to get the resources the sector deserves. It is noted by a key informant that:

> *"So, one of the arguments .... viewed as a negative thing in the health sector is that the health sector does not tell their story. How health is interwoven into the entire economic landscape of Ghana as a nation and how important health is for the economic health of the nation"* (KII, DP, 2020).

Covid-19 has presented a classical example of how the economy is dependent on a responsive and quality health sector and therefore presents an opportunity for the health sector to engage the Ministry of Finance on the necessary investments in the health sector.

One of the effects of not having enough funds is the delay in distributing resources for the running of the sector. As a result, funds may arrive at a time when it is not relevant and may therefore be misapplied or misused. The mismanagement and misappropriation of funds also has significant impact on the limited resources in the sector. One of the major criticisms against the Ministry of Health by the Ministry of Finance is that it does not manage its resources effectively. The challenge then is not necessarily getting more resources for the sector, but also how what is already in the sector is being managed. A key informant confirms the Ministry of Finance's challenge with the financial management practices of the Ministry of Health by asserting that:

> "*I was talking to the Minister of Finance at that time, one of his main complaints was that the Ministry of Health does not know how to use resources effectively, that they are inefficient. He gave examples of how they were going to borrow money from the private banking sector at 25% interest, he said that was suicidal....."* (KII, DP, 2020)

Another key informant supports this assertion:

> *"It is not just that we need more resources or need to expand the fiscal space but it is how those resources are spent and how they are trapped and managed. Because we might have savings and better ways to spend money than is currently happening"* (KII, DP, 2020).

Also, the Ministry does not know exactly how much money comes into the health sector. There is no accurate record on how much the different stakeholders contribute, there is no official tracker of resources in the health sector that can tell you the amount of resources in the sector, which part of the sector consumes more of the available resources and which part is still struggling with sponsorship. Non-state actors may also support some parts of the health sector without any reference to the Ministry of Health. As a result, such resources may not be accounted for or acknowledged in the accounting of resources in the sector.

6.2.1.2 Efforts by Government to address challenges in the financing health space

The Ministry of Health is rolling out GIFMIS to streamline financial management of the resources to the Health Sector. Even though all the models at the various levels within the GIFMIS platform are not completely operational, it is expected to reduce some of the leakages in the system by capturing the MOH, GHS and district level in the transfer of funds and resources. This is to increase transparency and improve the time between the transfer and receipt of funds at the district level. As stated by a key informant *"Just by the click of a button, every district or region will be prompted. This is to cut down on the time between when funds are sent and when received by the district. And the amount is captured" (*KII, MOH, 2019*).*

The setting up of the private sector unit at the Ministry of Health was to facilitate private sector engagement in the hope of mobilizing resources and strengthening relationships for health sector development. However, much of the engagements comes from the private sector

itself and not the Ministry of Health. Also, the private sector is more interested in implementing or providing support that is visible or infrastructural in nature but less interested in support that may just provide funds to the sector for the Ministry to dispense of as they see fit.

6.2.2 Development Partners

Development Partners (DPs) support Ghana's health sector through commercial and concessional loans, grants and technical support made either directly to health facilities or through the Government of Ghana, Ministry of Health or the NHIA. DPs also support the sector through projects that they execute themselves. Donors contributed about half of the resources in the health sector prior to the expansion of the NHIS and were very instrumental in the Ghanaian economy and the health sector specifically. Donor funding has however, been reducing for some years now, in part, because of Ghana's status as a lower middle-income country and in part because of current economic limitations of most donor countries and organizations. This has made donor funds an unreliable source of funding for the health sector.

DP's may work directly with stakeholders in the health financing sector or through implementing partners. In recent times, DPs are more engaged in health financing by offering technical assistance, conduct reviews and advocate for reforms in the health financing sector. One important element that DPs are working in health financing is public financial management that is, the efficiency of managing the resources in the sector. DP's may support an actor of interest in the health financing space directly, bypassing the Government or Ministry of Health. They may sponsor NGO's, civil society organizations or health institutions directly. For instance, DANIDA has remained in the financing of mental health in Ghana for some years now whiles the USAID is currently offering technical assistance to the

NHIA. Where donors engage directly in-service provision, it is usually to complement government's effort in an area. This is rare and usually found in under-privileged areas and the focus is mostly on public health. These interventions may not be priority areas for government at the time they are being offered but, government accepts these offers because though it may not fall in their priority areas, it may still lead to health system strengthening. The quote below illustrates how DPs are still involved in the health financing sector:

> *Well, I know there is pharm access group, which is an international organization. For some time now they have been supporting NHIA in our work. There is the World Bank, Marie stopes among others who helped us to identify the poor but, pharm access group is taking it a step further to provide financial resources to health facilities that we were indebted to. That is, those we realized we could not pay on time. They will pay in advance to the provider and then when NHIA pays they will deduct the money with some interest added to it…..* (KII, NHIA, 2019).

Even though DP's may not be as important as they used to be, their position as major players in the health financing sector still gives them considerable power when it comes to policy deliberations and dialogue on health financing because they have access to policy makers. DP's make cases for what they believe will work, review policies and craft policy documents and engage policy makers at the highest level.

> *"one area that we are trying to work on is to create that document and possibly give a presentation. Something that engages the higher level, parliament members. Lucky for the covid crisis, we have an individual who was named the corona virus coordinator, he has direct access to the president and is able to influence the decisions that are being made and how we can look at health differently"* (KII, DP, 2020).

6.2.2.1 Challenges DPs face in the health financing space

Whiles all this gives them considerable influence, they still have some challenges in navigating the health financing space. The main challenge confronting the ability of donors to effectively play their role in the health financing space is the over politicization of policy issues. The technical aspects of a policy may look and sound good but once the response of

the citizenry and political opponents of the ruling party is negative, they sometimes lack the political will to follow the policy through. An example is the introduction of capitation that was piloted in the Ashanti region of Ghana in 2012. Though the policy could help in mitigating the challenges encountered using the fee-for-service (FFS) and Diagnosis-related-grouping (DRG) by containing the cost of health services and spreading the financial risk among all the stakeholders, the time it was introduced, how it was introduced, the region in which it was piloted and the politicization of the issues that emanated from its implementation all led to its eventual scrapping off. Important health financing policy reforms are therefore kept on hold in order to get the right time, space and political approval to be implemented.

> *"And so, it is an on-going process. It is a very political, sensitive area right now, before elections nothing will happen. Just because you don't want to introduce anything that..... There is still a fresh memory of capitation. So, we are kind of waiting till after the elections to see what happens. Then we will try to implement some more reforms that would allow for optimum strategic purchasing"* (KII, DP, 2020).

Also, development partners are not being proactively engaged by the government through the churning out of the relevant reports, budgets and plans. This is not just as a result of low capacity but also lack of adequate personnel to produce the required documents. This makes it difficult for development partners to know exactly where the gap is for them to fill. It also limits the level of engagement because they may have so much to offer but limited because of the lack of interest, pro-activeness or commitment on the side of government. Government is not able to demonstrate or justify with data evidence why they have to be allocated certain resources and they are not able to sufficiently account for some of the resources given to them. In response to how wide or restrictive the health financing space provided by government is, a key informant had this to say:

> *" using this covid as an example, there are a lot of development partners that have a lot of money available and just waiting for a plan from the government*

> *and the budget in order to allocate…. They can say we need this gap filled. Something like you, development partner A, fill this gap. B, you will fill this gap. But we never get that"* (KII, DP, 2020)

> *"And so we are really encouraging the ministry to develop an online tool where they can track the resources coming into the sector. And this would be broad, this is donor, this is government, this is private sector. In order for them to know what actually is coming into the sector because they don't know"* (KII, DP, 2020).

Despite the inability to account properly for resources, corruption does not seem to be one of the challenges that development partners experience in their financial engagement with government. This is because most development partners have very strict laid down procedures that must be followed before resources are accessed or when accounting for its use. That is not to say that some government institutions don't spend on items or activities that they are not supposed to spend on by finding other ways of accounting for them.

6.2.3 Non-State Actors

6.2.3.1 Civil Society Organizations and Non-governmental Organizations

Civil Society Organizations (CSOs) are non-state actors including "community groups, non-governmental organizations (NGOs), labour unions, indigenous groups, charitable organizations, faith-based organizations, professional associations and foundations" (WHO, 2018). CSOs try to address specific health challenges by facilitating dialogue between the government and the population, proposing policy alternatives and implementing health financing strategies or programmes. They bridge the accountability gap by holding public officers responsible for the results achieved in health financing. They also build alliances between the government and private sector by raising both political and donor or private sector support for health financing. Civil society in Ghana was very instrumental and active in the initial drafting of the NHIS and has continued to create awareness and propose innovative solutions towards a more robust health-financing scheme.

Civil Society Organizations and NGOs in the health sector draw resources mainly from international donors and development partners.

> *But also, some of the financing comes from donors so we don't have our own money in our pocket. We depend on donors, so we get money from them, we do service delivery in some areas"* (KII, CSO, 2019).

From the in-depth interviews, there are locally based CSOs who are usually sponsored and supported by CSOs with international reach and links. Globally based CSO's try to build the capacity of local CSO's in order to use them as the front runners of their initiatives and campaigns in Ghana. There is a coalition of NGOs in health, whose main aim is to synchronize the efforts of all the NGOs in the health sector. The globally based CSOs are part of a confederation within which they have experts in the health financing sector who can understand macroeconomic issues, can fashion out strategies, research studies, and conduct all kinds of analysis. If an expertise cannot be found in-house, international CSOs can hire and pay for such expertise. However, some local CSOs lack that kind of capacity despite the efforts by international CSOs to build their capacity to effectively play their role as CSOs. Whiles some local CSOs like Send Ghana has made a name for itself in budget analysis, others lack the capacity to do some of these analyses and play their advocacy role well even if they are versed in certain technical issues in the health financing sector.

CSOs in health, have been working together to campaign for increased budgetary allocations to the health sector by giving suggestions during the budget preparation process, tracking and analyzing the annual budgets after it has been completed and presented and engaging the highest policy makers in the health financing sector. This helps them study the trend of resource allocation to the health sector and assess whether the recommendations they made during the budget preparation phase were taken into consideration. One officer had this to say:

> *So our role within that scheme is to actually make sure that the voices of the very poor and vulnerable are heard and that we have a scheme that is really sustainable and is delivering health care to people who really need health care. So that is where we see ourselves as civil society* (KII, CSO, 2020).

> *"What we aim for and what we have been doing is to engage the highest decision makers possible, so we work with our partners and we are engaged in the national budget making process at the national level. We aim at engaging the parliamentary select committee on health, parliamentary select committee of finance and even the finance minister himself"* (KII, CSO, 2020).

That is what CSOs do at the policy level but at the lower level, even though they are not largely represented in the delivery of services, they are interested in how providers of health services are delivering those services. That is whether it is accessible, at acceptable standards and whether there are leakages in the system.

How CSOs draw attention to their concerns

CSOs use various means to draw attention to their concerns and to disseminate information. These include the media, direct engagements, reports, engagement of citizen groups, marches among others. They use all of these forms of engagement to draw attention to the fact that the investments that has been made to the health sector is inadequate, educate the public, as well as recommend alternative arrangements that may work. OXFAM for instance is credited with the "infamous" report on the NHIS in 2008 critiquing the structure and sustainability of the National Health Insurance Scheme. Apart from educating the public on health financing issues, the media is often used when they feel their needs have been sidelined by government.

> "*Most of the time we just wait and see, look at the budget and see whether what we have sent on the budget reflects. Then we resort to the media to say well, this is our critique of the budget but we still offer our recommendations*" (KII, CSO, 2020).

CSOs work closely with local communities and are sometimes assumed to be the mouth piece of these communities or the citizenry. Though their main objective is advocacy, some CSOs

provide health care services at the local level. This is not on a large scale and is usually in support of the state. Their focus at the local level is mainly on primary health care because they believe that is where the poorest reside and should benefit more from public health interventions. The Christian Health Association of Ghana (CHAG) for instance, is an umbrella body of individual Christian institutions whose focus is on direct service delivery. They run hospitals and health facilities especially in underserved and under-privileged areas of Ghana. Because they mostly serve under-privileged communities, their services are subsidized to reflect the status of the area of operation.

> "*also, at the community level sometimes we also invest in health care financing because we provide health facilities in some communities"* (KII, CSO, 2020).

Some CSOs working in local communities have had to pay for health insurance for groups or individuals that they engage in their programmes and projects. This is sometimes because the people are too poor to afford paying health insurance and yet not captured as indigents under the NHIS. The narration below speaks to this:

> "*We are working with a lot of communities and we know the situation in which many communities are. There are a lot of people who are hardly able to raise any incomes at all*" (KII, CSO, 2019).

Government's control of the health financing space

On how they are navigating the health financing space, CSOs have created their own space, however, the space created by government is not consistent and the engagement fragmented. The space is opened or narrowed depending on who is at the helm of affairs and how they perceive the agenda of CSOs. CSOs can organize their own programmes and invite the government but they either don't show up or those sent to represent the government are not senior members who can make decisions or actively engage them on issues. Where

government invites CSOs into their space, it is not participatory enough. Some CSOs may be selected to talk on behalf of all CSOs. In the situation where they are allowed to present their case, the time allotted may be too small and so, they present the major points and then give out the prepared document to the government. There is no avenue for direct feedback and response to the issues usually raised by CSOs in those documents or engagements.

> *"Sometimes the space is not big enough, the time is not enough. Sometimes the processes are such that it does not end up being a dialogue. It is a monologue because you go and make a presentation of what you think and then they decide what to do with it. So, you do not have the opportunity of direct feedback on what you have said until you see a policy document or a budget and then you go through it to see whether what you said was taken or not"* (KII, CSO, 2020).

> *"I had not started working with Oxfam when this analysis about the NHIS scheme was done but we did not get any direct response from government until say 3-4 years later when a new Chief executive chanced upon our report and decided to call us to dialogue. So that is how it works. It is difficult to attribute certain responses of government to our campaigns because sometimes within the government circles some people share the same views. So, whenever we see them pick up anything, we have asked for, we pick it up as one of the things that we have contributed to changing things. But certainly, the amount of time and the way the engagement is structured falls short of what we will describe as adequate"* (KII, CSO, 2020).

The above quotes show that though governments may create space to engage CSOs it may not be relevant to their agenda. Recent developments on seeking ethical approval from the Ministry of health before they engage in any research or analysis of any health sector information further limits the efforts of CSOs in their advocacy and engagement of government and other stakeholders in the health financing sector.

Challenges CSOs face in the health financing space

Some of the challenges the CSOs face in effectively engaging government in the health financing space could be attributed to the multiplicity of non-state players in health financing, running similar health financing programmes and projects. This complicates the work of the government and donors because they are not able to easily decide who to work with and what

the collaboration will look like and so may end up hand picking CSOs who may not have the capacity to engage them at the policy level. Also, the nature of funding may affect the level and nature of their involvement in health financing. Short term funding for projects means that some of them are not able to follow an action through to the end. All of these challenges coupled with funding issues put them in a weak position when compared to other actors like donors in influencing health financing policies and dialogue.

6.2.3.2 Private Health Sector

The private sector can be involved at different levels of the health financing value chain. Private financing of health could come from profit institutions and Non-governmental Organizations. The private sector is involved in provision of health care services and products. The private provision of health care gives competition to public health institutions and is usually associated with better quality of health care than can be found in the public sector. The private sector generally tends to be more sensitive and responsive to the needs of the public. Private health facilities are concentrated in the Greater Accra and Ashanti regions and are mostly absent at the primary health care level and rural areas.

There are also the private insurance schemes that provide direct financing of health care. Private Health insurance Schemes are licensed and regulated by the National Health Insurance Authority under the National Health Insurance Act (852). There are fourteen licensed private health insurance schemes in Ghana (NHIA, 2020). Private health insurance offers insurers both out-patient and in-patient benefits, usually over a one year. It is prevalent among formal sector workers who are mostly insured by their employers and the middle to high-income earners. As a result, the informal sector and for that matter the poor has not been able to take advantage of health insurance offerings from the private sector. Financial

institutions and informal money lenders also provide health financing by lending to people who may have health expenditures to make.

Premiums are calculated based on an individual or groups risk. But some private insurance companies do not base their premium setting on any actuarial calculations, it is mostly influenced by what their competitors are charging in the industry. Because of information asymmetry in the health insurance sector, the private health insurers try to reduce risk by trying to retain healthier people whiles they push out sicker ones. Individuals on the other hand, may also hide their true health status in order to access health insurance.

The private banking sector also provides financing to the other actors in the health financing space like the Ministry of Health, the NHIA, private health providers and households. These institutions sometimes borrow from financial institutions in order to meet their commitments like pay claims on time and for building health infrastructure.

Challenges the private health insurance sector faces

Though the Ministry of Health recognizes the importance of the private sector as a result of which they set up the private sector engagement unit, the involvement of the private sector in health policy however is very limited. They are represented at policy debates under the private health providers but their influence on debates is not as strong as can be found in other countries like South Africa and the United States. The regulator is also accused of not actively monitoring and regulating the activities of the sector leading to irregularities in the setting of premiums, paying claims among others. In 2015, the NHIA launched a regulatory guideline to health insurance companies to safeguard the interest of policy holders because of the consistent challenges that policy holders had in retrieving their policies when a health insurance institution folds up or goes bankrupt.

6.2.3.3 Households

Household contributions to health financing are in the form of premiums paid on insurance, out of pocket expenditure made on health services and products, 2.5% NHIL and 2.5% SSNIT from formal sector employees. Households are the ultimate purchasers of health services and products. Even where the other actors purchase health care services and products, it is usually on behalf of households or individuals. The contributions of households to health financing remains high and crucial as out of pocket health expenditure in 2018 accounted for about 37% of total health expenditure in Ghana (WHIO, 2020). This is despite the unarguable role of the NHIS in reducing out-of-pocket expenditure. The payments of unapproved fees and co-payments may be some of the reasons for the high rate of out-of-pocket payments in Ghana.

How households mobilize to finance health

Households draw resources to finance health either from the households' regular income or from external sources such as remittances, borrowing or selling assets. In some cases, especially in villages, NGOs or philanthropic organizations may pay for health care or premiums on behalf of households or individuals. Though the NHIS is supposed to capture poor households and exempt them from paying premiums, targeting has been challenging. Poor households who are not captured are therefore forced to find other sources of income to pay for health care. Such households usually depend on communal support to cover health emergencies.

> "*A child swallowed a 20 pessewa coin and at that time there was no money. They sent him all the way to Korle-bu. They said they will take 16 million (GHS 1,600). So, they announced it throughout this community and whatever anybody had they contributed for the child to be operated on*" (FGD, Kordiabe, 2019).

Challenges households face in the health financing space

The household does not play any obvious role in health policy dialogue; it is not a vocal shareholder. Under the Mutual Health Insurance Schemes, which amalgamated into the NHIS, community forums were organized annually to discuss the premiums and to fix a price. However, under the NHIS, households do not feel a part of the processes of setting the premiums.

> *When it was district mutual, annual general meeting will determine how much to pay so when we meet, we send a proposal that this is how much we want to charge. The people will also come back to say that based on the economic situation this is what we can pay. Then back and forth and the whole assembly will agree that this is how much will be charged. When it was semi-autonomous, the communities were involved but now because we have dissolved those structures, management tries to ……* (KII, NHIA, 2019)

Though majority of the respondents from the survey indicated that they know where to go if they were having challenges with their health insurance card, none of the participants in the focus groups recalled ever participating in a public forum to discuss premiums on health insurance.

> These are some of their thoughts: *"the last time I went to renew my card and that of my son, they had increased it. It used to be 5 cedis and they now said it was 8 cedis. So, imagine if I did not have extra money on me" (FGD, Kodiabe, 2019).*

> *"No one has ever asked us how much we want to pay for health insurance. I have never even heard any such thing here" (FGD, Guagbuliga, 2019).*

6.3 Appraisal of MFIs offering health insurance

Based on in-depth interviews conducted with officials of the Ghana Association of Microfinance Companies (GAMC), MFI's and the literature reviewed, the study found that, Microfinance institutions are more concentrated in urban areas than in rural Ghana. Also, Greater Accra region seems to have the largest share of MFIs in Ghana accounting for about 90% of MFIs. Though health financing does not form part of the core mandate of MFIs in

Ghana, some MFI's have found innovative ways of incorporating health financing in their operations because of the effect that ill-health has on the performance of their clients.

Whiles some MFIs are focused on providing Micro-health insurance to their clients, others are more focused on encouraging their members to save towards it. There are MFIs who in partnership with private health insurance schemes offer health insurance to their clients. Others as part of the loan agreement are given a micro-insurance package, which pays for the loan installments missed in case of any catastrophic event including hospitalization. Star-Micro, a micro insurance company underwrites about 80% of micro-insurance policies for microfinance institutions in Ghana. These micro-insurance companies however, operate on the fringes of the framework within which MFIs work. The Ghana Association of Microfinance Companies for instance does not officially know the micro-insurance companies that underwrite the insurance products of MFIs.

Some MFIs also have health savings products meant to be accessed when a household member is sick and needs financial help to access health care. Others do it for free as part of their corporate social responsibility. As a client, they will take all business and some personal details including health insurance. Once the membership expires, they will ask the client to bring the card and then they do the renewal on behalf of the client. When it is renewed, the client goes back for it. Some do not pay for the client but prompt the client when it expires, so they can renew on time. An example of a savings product by an MFI is the hospital cash, which is a savings product to be accessed by a client in case of hospitalization. Once a client signs onto the product, GHC100 or more of the money in their account is reserved or locked for about a year. The client cannot withdraw this money. If the client needs to access the money, after the stipulated period due to hospitalization, the money is doubled and paid to the health facility on behalf of the client.

Whiles some of these products are good and formulated in recognition of the challenges that their clients face and in order to be innovative about their products and diversify their portfolio, they may not have the right approval from the Bank of Ghana. One of the major issues that formed part of some MFIs losing their license was the issue of not adhering to protocols and regulations. However, it could have been the case that regulation was loose making it easy for some MFIs to operate outside what is considered acceptable by the regulator.

6.4 How Microfinance Institutions can fit into the health financing structure

Authorities regulating the MFI sector and the role they can play

The operations of Microfinance Institutions are bound by, the Banking Act 2004 (Act 673 replaced by Act 738), Non-bank Financial Institutions Act, 2008 (Act 774) and the Ghana deposit protection Act, 2016 (ACT 931) which was amended in 2018 as Act 968. The Bank of Ghana licenses, regulates and supervises the activities of Microfinance Institutions in Ghana. The Bank of Ghana has categorized microfinance institutions into four tiers and directed that every tier must have an association to coordinate the activities of that tier. The Ghana Association of Microfinance Companies (GAMC) is the umbrella body for all tier two Microfinance companies. All tier two companies are deposit takers. The main aim of GAMC is to serve as advocates for tier two MFIs and also be the liaison institution between MFIs and other stakeholders like the Bank of Ghana. They give training to members and increase their capacity in order for them to implement best practices and also be abreast with the technological changes in the sector. For Microfinance Institutions to serve as a platform to increase enrollment in the NHIS therefore, there must be a collaboration between the Bank of Ghana and the stakeholders in health financing like the Ministry of Health and the NHIA.

To go into the operation of additional services that may not fall under their core mandate, Microfinance Institutions have to seek written authorization from the Bank of Ghana. Once the Bank of Ghana gives authorization on a product, they will have to monitor it and MFIs have to report on it in their communication and reporting to the regulator. The Ministry of Health and NHIA will have to draw an MOU spelling out the modalities of the collaboration with the Bank of Ghana and GAMC. The MFIs would report to the Ministry of Health and for that matter the NHIA head office, through the NHIA's district offices. This is because it is the district offices that work directly with the communities and in-charge of registration and renewal in communities. Also, NHIA does not recognize partial registration so the engagement with the district office after the client has fully paid with the MFI will be the best option. Reporting to the district office will also make it easy and faster to resolve any issues that come out of the process of registration or renewal through MFIs.

> *"In our system you are supposed to pay and be issued a receipt because it is a health matter until one makes full payment you cannot get benefits from the scheme you cannot pay half and get benefits. So now so far as NHIS is concerned, a member is someone who has fully paid and has been issued a card so now if you have paid half or quarter or whatever, you are not a member you only become a member after full payment has been made so in between whatever happens is the customers problem and this should be well explained*" (KII, NHIA Official, 2019).

> *"what I think can be done is to have an arrangement with our district finance section so that, the names of those who have fully paid with the MFI will be submitted to the NHIS office. As and when the client visits the district office with the necessary documentation, they will be issued the card. So that, the total amount will be written to the NHIA in bulk* (KII, NHIA Official, 2019).

MFIs can provide savings and loans for health financing

MFIs can fit into the health financing space without going out of their core mandate of providing savings and loans for low-income earners and people mostly found in the informal sector. But because the cost of health insurance seems to be small to be given out as a loan, it is preferred that they offer it as a savings product.

> *"It should be a savings product because as for this one if it is a loan how much are you going to charge for it? If it is a savings product, it will give them some liquidity and they can charge a small fee for the service provided. Unless it is something added to an existing loan then that one is fine*" (KII, GAMC, 2019)

Though MFIs seem flexible and so can effectively fit health financing into their agenda, the same cannot be said of the MOH and the NHIA. They do not have any plans of engaging in such collaborations. This may go back to the explicitly of the law on how they are to mobilize resources and also issues of design.

> *"So, for me it is a natural harmony and alignment of interest and microfinance institutions could be catalytic in promoting the membership of the NHIS. Now, does NHIS have standards to promote that, clearly not. They have no policy of doing that they don't even have a policy of promoting family membership, which is a natural thing for every insurance scheme, which is very strange* (KII, DP, 2020).

MFIs could help reduce the issues with adverse selection that the NHIS suffers because MFIs are interested and mostly engage economically active individuals who are most likely to be healthy. This will ensure that the scheme is representative of the population and not just the sick or the vulnerable.

> *"In that, say microfinance institutions will tend to have people who are healthy and have income so that is a very good target group. That is a target group that will enhance the profile of the membership; make it look less adverse selected"* (KII, GAMC, 2019).

Despite the fact that MFIs can enhance the ability of the NHIS and the MOH for that matter to mobilize resources for the health sector, certain factors must be considered before such a collaboration can be successful.

6.5 Success factors to collaboration between government and MFIs in health financing

For the collaboration between the government and MFIs to work well, there is the need to assess what the success factors are. The next section therefore analyzes the perception of the various actors involved in the study on the factors that are important to the successful implementation of a collaboration between government and microfinance institutions to increase health financing especially through the NHIS.

6.5.1 Clearly spelt out policy and terms of reference

To successfully implement a collaboration between MFIs and the government of Ghana to increase health financing especially from premiums, the need for a well carved out policy document and terms of reference spelling out exactly how the collaboration will look like, and what is expected of the major stakeholders emerged as a key factor. This will help streamline all activities and adequately inform each stakeholder of their role and what to expect from other stakeholders in the collaboration.

> "*The ministry will define a base. It is the responsibility of the Ministry to define a role for them. This will be done with all stakeholders. They provide all documentation, define the terms of reference and describe the roles and responsibilities*" (KII, Ministry of Health, Accra)

> "*Without a clearly defined policy, things will be done haphazardly. That is how things were before Bank of Ghana stepped in to regulate the sector*" (KII, GAMC, Accra)

Clearly laid down procedures and policy will lend some credibility to the collaboration and make people perceive it as reliable. Also, once communication is clear from the beginning it ensures that everyone has maximum information with which to operate.

6.5.2 Advocacy/Awareness creation

CSO's, development partners and non-governmental organizations must keep the major stakeholders in the collaboration on their toes by constantly engaging them, drafting out

documents and making recommendations that can make the collaboration better and also informing the public as major stakeholders on what to expect from the collaboration and how to go about it.

> *"The NGO's have to advocate for the people and also educate and inform them. Otherwise, people will think that they will run away with their money. You know the issues with that sector"* (KII, MOH, Accra).

The unpredictability of the Microfinance sector requires that individuals have adequate information at all times both from the institutions themselves, regulators and from civil society.

6.5.3 Stakeholder engagement

The space created for the collaboration should be made more open and engaging so that all stakeholders can play their role effectively without hindrances from the major stakeholders like the government and the microfinance institutions in this case.

> "*Since this has to do with money, all stakeholders including the Ministry of Finance and Parliament must all be involved*" (KII, MOH, Accra).

The household as a major stakeholder or end users of this collaboration must be thoroughly engaged in order to get the desired outcome which is to increase uptake of the NHIS leading to more resources from premiums. Once stakeholders are well engaged, they tend to see the collaboration from their point of interest and how it will benefit them, encouraging them to play their respective roles.

> *"There are multiple layers of engagement that should be accessed to ensure that all stakeholders feel a part of the process and understand what is involved and that is what will make them feel ownership"* (KII, CSO, Accra).

6.5.4 Regulation enforcement

From the perspective of the Association of Microfinance companies, the enforcement of regulations is a major success factor. This is because no matter how detailed the policy document and terms of reference is, without proper regulation, stakeholders are likely to go to

sleep on their job. This will result in distortions of how the policy is supposed to work, which may lead to dissatisfaction with the policy, by individuals/households which will eventually affect how the public perceives the collaboration.

The enforcement of regulations is especially relevant here because of the reputation of Microfinance institutions, which may affect uptake if the regulator is assumed not to be on top of their job in ensuring the right things are done. Both the Bank of Ghana and the NHIA, major stakeholders in this proposed collaboration, have come under heavy attack for their inability to properly play their role as regulators. But since the major clean-up of the Microfinance sector in 2019, the Bank of Ghana seems to have made some efforts at ensuring that the sector is well monitored and regulated by assigning five MFIs to one officer.

> *"It is compulsory that everybody and even if you are a worker… if you are an employer you have to make sure that your employees are insured but as I was saying, it is one thing enacting a law and another implementing it. So now at the implementation stage how do we enforce strict registration if people are going to pay from their pockets"* (KII, NHIA official, 2019)

> *"If it is going to be business as usual then it is not going to work. Government must ensure that they abide by the rules and regulations. Auditors must also enforce the laws and prosecute anyone they find doing something wrong*" (KII, MOH, Accra, 2019)

Though regulatory authorities like the NHIA have been given the authority to sanction the violations governing most of their engagements, they do not seem to feel that they have the power to enforce them.

6.5.5 Technology

From the perspective of donors, to be successful, the collaboration must leverage on technology to reach a lot more people and to get very interactive. Especially in these covid-19 times where the methodology of face-to-face engagement may be challenged, there is the need to use technology to fill the gap created by distance. Technology can be used to

communicate to people about the product, how it works and where they can get it. Technology can also be used to collect payments through mobile money accounts. E-accounts can be opened for clients to save a little at a time just like some telecommunications companies are doing now for insurance products. They take a little of your airtime every month as payment for insurance.

> *"I think they have to leverage on technology like SSNIT is doing. I think last year or last two years, you can remit your tier three pension via your phone. So, microfinance have a medium but they have to leverage on technology. The key word here is technology. If the financial institutions themselves are not embracing this technology, then they cannot reach out to the informal sector. Now everybody is moving to digital, now look at what covid is doing"* (KII, DP, 2019).

> *"The kayayes and makola women are becoming very tech savvy. They know how to use mobile money and they are sometimes remitted for services via momo. I don't think that kind of person will be willing to walk to a microfinance institution to pay for health insurance but if there is a medium and there is education and awareness, they can just sit in their homes to send it. Other than that, I don't think they will be willing to…."* (KII, DP, 2019).

6.5.6 Trust

The microfinance methodology is built around self-help groups and a close and regular interaction with a particular loans or savings officer. This builds a relationship over time which is based on trust in the person engaging them and not the institution per se. Once the people know that their funds are protected they will be willing to be a part of the collaboration.

> "*They will embrace it if they trust the person involved. You know the informal economy in Ghana is based on trust*" (KII, DP, 2019)

> "*There must be truthfulness and they do not have to run away with people's monies. It has happened in this community before, so trust is important. If the foundation is right, there will not be any problems. When that happens the leaders in the community can act as facilitators but if anything goes wrong, they will come and beat us (community leaders) in our homes*" (FGD, Kordiabe, 2019).

6.5.7 Location

The study found that microfinance institutions though supposed to serve the poor who are concentrated in rural areas are over represented in the urban and peri-urban areas. As a result, a microfinance approach may not give much value to the rural population. Rural Banks may be used as a platform in this case to serve the rural populations because they also use some microfinance methodology which includes serving a client as close as possible to their place of work or residence and also taking "susu" like savings and loans. The geography, context and predominant livelihood may also affect the adoption of the product.

> *"If you look at their geographical concentration, most of their activities are mostly concentrated in the urban and peri-urban areas though a few can be found in the rural areas. For the rural areas, it is mainly rural banks that are there. So when it comes to the rural population, I think the Rural Banks are relatively well placed to serve the population than microfinance institutions"* (DP, Accra, 2019).

> *"We had a project at USAID which was trying to drive financial inclusion in the North. It was not really successful but in the south when they developed this savings product, they called it yellow savings, a lot of market women bought into it and they got tremendous results but the same product when deployed in the north, was not successful"* (DP, Accra, 2019).

In response to whether they know of MFI's and whether they operate in their community, one participant of a FGD answered that: "*we have Yilo star from Somanya and Akuapim Rural Bank from Adukrom. They don't stay here and sometimes they help us with small loans"*. Participants in the FGD in the West Mamprusi were equally more aware of the activities of Financial NGOs (FNGOs) than MFIs in their area.

6.5.8 Price

From the perspective of households, the price of the product will affect its adoption or otherwise. Though they acknowledge that the cost of transport, cost of waiting which takes them away from their source of livelihood for days also has an effect on the cost of the

current NHIS and that something must be charged for the new service, they are also not willing to pay too much for it. They are willing to pay between GHC2 to GHC5 in some instances to cover the cost they would have incurred to travel to the district capital to renew their membership or pay the annual premium.

> *"So you see, she has got her GHS25 but it is left with the transport so if she is lucky and they come, then good. Even if they charge GHS5 extra, it is better than the stress of going up and down and the cost of transportation*" (FGD, Kordiabe, 2019).

Once all the above success factors are considered, MFIs can contribute to health financing and fit into the health financing structure as a private sector actor.

6.6 Discussions

The role of other actors and the challenges in the health financing space

The health financing sector is made up of both state and non-state institutions implementing similar or different financing schemes in order to effectively and efficiently mobilize and use resources for the benefit of the health sector in Ghana and towards the achievement of UHC. Much of the work by non-state actors in the sector is mostly to complement government effort in the sector. The health financing space is controlled by the government who decides who is allowed into the space and the level of engagement required. Though development partners have successfully repositioned themselves in the space in order to remain relevant to the health policy making process, CSOs have not had that much success. This control of the health financing space by government without proactive stakeholder engagement and efficient resource use leads to the perception by some actors that the policy instruments drafted for the sector are ineffective and politically motivated. For instance, the NHIS is compulsory but voluntary at the same time. This speaks to some of the contradictions in the policy that may make it seem ineffective. The influence of politics, the multiplicity of CSOs and the lack of capacity of local CSOs especially, limits their influence on the policy making

process. Though there are formally documented rules of engagement between government and the other actors, much of the processes are informal and based on the government's experience and discretion. This finding confirms those of Abdulai (2015), who found that the legitimacy of the policy process is questioned when government has a stronger position in policy dialogue than non-state actors. The level of participation, the depth of participation and the quality of participation all affect how non-state actors perceive the policy space.

Customer engagement remains lacking as the voices of the end users of the health care system is muted. They are therefore not able to challenge the health financing policies like the setting of premiums that affects them. CSOs are assumed to speak on behalf of the individuals/households because they work closely with the communities. These confirm results in Kotoh and Van der Geest (2016) who found that the core poor are silent in society and so are not able to demand their inclusion in the exempt category of the NHIS. The study recommends that CSOs among others, advocate for the excluded by proposing policy changes and educating the public on who qualifies for exclusion so that they can demand it on their own.

Whiles the government provides health care at all levels of care, the private sector continues to concentrate on urban areas and the middle to high-income earners with CSOs mostly operating at the public health level. Government provides health care at the lower level because it is their duty to provide health care at that level and also because it is cheaper than health care provision at secondary and tertiary levels. CSOs on the other hand, focus on that level because they believe that is where the poorest seek health care. The private sector is mainly for profit and so not interested in providing free or subsidized services for the poor.

For an effective health financing system therefore, there is the need for government to track the resources coming into the sector, know the areas that take up more resources and the gaps remaining. The absence of a tracking system means there could be duplication of effort in the sector and misuse of the available funds. This could also mean that the sector may not need additional funds but rather put in a financial management system that can effectively distribute and manage what is already available. Financial mismanagement continues to be one of the biggest challenges of the Ministry of Health and the NHIA (Adua et al, 2017).

Though the GIFMIS for instance was implemented in order to manage some of the inefficiencies in the financial system, it is still not fully operational thereby limiting its ability to effectively seal the loopholes in the financial management system. Because of the inability of the health sector to communicate its role in economic development, the sector is not able to compel the government to increase the investment made into the sector. As a result, the health sector is not given priority in resources allocation decisions. Funding inadequacies has facilitated some of the challenges in the health sector like the increase in user co-payments and service charges in hospitals. Similar findings are documented in Adua et al, (2017) where hospitals are compelled to increase service charges in order to maintain their facilities. This covid-19 era however, presents the Ministry of Health with a great opportunity to express how the health sector is interconnected to the rest of the economy. The health sector finally has the attention of the Ministry of finance and can use it to their advantage.

Though the sources of funding for the health sector looks progressive and diverse, the sector has not been proactive or innovative enough to bring in more resources. For instance, much of the engagement with the private sector is initiated by the individual organizations themselves. As a result, the sector is not able to dictate the terms of engagement as some of these organizations or donors come in with predetermined areas that they want to support,

which may not be in the interest or focus of the sector at the moment. This development could be because the policies that they work with are explicit on their sources of income and so does not make room for seeking resources outside these stipulated avenues. These established avenues of revenue mobilization have however failed to bring in the required resources to run the sector.

Aside lack of innovative capacity to engage the various stakeholders, they also lack the capacity to produce the various reports and documents that will make an investment case for the health sector to actors like development partners. Using MFIs as a platform to increase revenue is an innovative strategy that falls outside the mainstream avenues and speaks to the fact that more innovation is needed in revenue mobilization for the health sector. This finding is consistent with Fusheini et al (2017), where the success of social financing schemes is tied to the innovativeness of policy makers in drawing resources for the sector. As the second major contributor of funds in the health financing sector, the NHIS mobilizes resources through several avenues however uptake continues to lag behind. Implying that the system put in place to either register or renew membership is not effective enough. The introduction of the mobile renewal application will not only help increase renewal but also resources from premiums. This system has to be reviewed however, to make it more accessible to the less educated populace and rural dwellers (Boaheng et al, 2019).

The role MFI's can play and the success factors

The Microfinance industry falls within the private sector and though most of them are for-profit organizations some are also Financial NGOs. This makes them sensitive to the needs of the people they serve. And so even though their core mandate is to provide appropriate loan sizes and savings products for low-income earners especially in the informal sector, the need for complementary services and products to mitigate the effects of ill-health on the

performance of their clients has encouraged some MFIs to fashion out health related loans and savings products. Micro-insurance health care products are being fashioned out with the collaboration of private insurance providers. This confirms Chowdhury (2017) who found that MFIs had become innovative by providing complementary service such as micro-insurance to its clients.

The willingness of MFIs to collaborate with private insurance companies to provide some form of health insurance may fall outside their core mandate is indicative of the fact that they are revolving and keeping up with trends in the microfinance industry in other parts of the world. Freedom from hunger (2014) found that microfinance institutions could effectively form partnerships and linkages with other actors to deliver health care related products to people (Johnson et al, 2014). For instance, the project saw a partnership between an MFI (CARD) and the national health insurance scheme of the Philippines and how it improved uptake of the national health insurance scheme.

Though most of such products are not with the approval of the regulator, it shows how responsive they are to the needs of their clients. This responsiveness and the wide distribution channels of MFIs puts them in a strategic position to serve as a platform for reaching people in the informal economy. Their reach is however limited in rural areas where rural banks are more visible. This limitation is probably because the urban informal sector is more vibrant and holds more value to them in terms of proximity and the diversified nature of livelihoods. The distance to rural areas increases the cost of the services that MFIs can provide to the rural populace making it unattractive. Even with the increase in rural non-farm employment, productivity is too low to influence the interest of MFIs in rural enterprises (Chowdhury, 2017).

The NHIS is troubled with the issue of adverse selection because most of those who enroll feel they have health challenges (Wang, Otoo & Dsane-Selby, 2017; Duku et al, 2016). Microfinance Institutions therefore provide some value by presenting a cohort that is economically active and healthy to cross subsidize the effect of attracting the sick and vulnerable under the NHIS. The willingness and ability of MFIs to partner with government will not automatically translate into improved revenue mobilization under the NHIS. The various actors and especially the government must have the political will to implement the collaboration. This may include setting out clear policies and terms of engagement, improve regulation enforcement and involve the households who are the end users of all these policies. Without the political will for instance pressure groups who are not in favor of the collaboration could lobby the major stakeholders to withdraw their support for the programme. An example is the situation in South Africa where the private health insurance system is so strong that it has made it impossible for a national health insurance scheme to be fully established. Fusheini, et al (2017) confirms the importance of political will in the implementation of policies in Ghana. The study found that the political will to implement the NHIS by successive governments has been one of the major reasons for its success in Ghana. Other success factors include the price, geography, awareness creation and advocacy, trust. These findings concur with findings like that of Jehu-Appiah et al (2016), Fusheini et al (2017) and Kutzin et al (2017).

6.7 Conclusion

There are multiple actors in the health financing operating at different levels. Government/state institutions dominate the health financing space. While other actors are engaged from time to time, their role is seen as a complementary one, meant to support government effort in the sector. As a result, there are challenges with the kind and nature of participation in the health financing space. Consequently, much of the efforts and resources

put into the sector by other actors is not captured or acknowledged by the state. As a result, the government cannot fully quantify the amount of resources that goes into the health sector. Covid-19 presents the Ministry of Health with an opportunity to make a strong investment case for the health sector. Advocacy is needed to ensure that government increases budgetary allocations to the health sector and provide an inclusive environment for the other actors in order to provide appropriate health care for all. Given the nature of microfinance institutions, they can conveniently fit into the health financing structure by sticking to their core mandate of providing small loans and savings options for vulnerable groups. There is the need however, for adequate stakeholder consultation and involvement in order to make appropriate institutional and regulatory arrangements that will be respected by all parties.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The study sought to examine the role that Micro-finance institutions can play to reduce health risks by improving health financing. The study reviewed the various actors in the health financing sector and the role that MFIs can play in that space. The motivation of households to participate and pay for health insurance through MFIs in the Greater Accra region and the Northern region was also assessed. Finally, the study examined the efficiency of MFIs in their current operation in order to ascertain if they are efficient enough to serve as facilitators in the provision of the NHIS to Ghanaians. This chapter summarizes the major findings of this study and draws conclusions thereof. Additionally, the chapter offers relevant policy recommendations and also indicates areas for further research.

7.2 Summary of Key findings

This study utilized both quantitative and qualitative techniques in sampling, data collection and analysis. Both techniques were used to complement each other in order to achieve the objectives of the study. In total, 14 Key informant interviews were conducted with development partners CSO's, MFI's, BOG, GAMC, MOH, NHIA and some community leaders. Two FGDs were held in each district, making a total of eight FGDs. Participants were drawn from social groups like the churches and solidarity groups. Quantitative data was sourced with structured questionnaire to 890 households and 51 MFIs. Households were selected through a multi-staged sampling procedure while MFIs were purposively selected. The study sought to examine the role that MFIs can play to improve health financing and thereby reduce health risk in Ghana.

7.2.1 Cost efficiency of MFIs

The Stochastic Frontier model was used by this study to estimate the cost efficiency of MFIs. The study presented evidence of significant inefficiencies in the Microfinance sector with an average cost efficiency of 50%. Wide variations are also observed between regions with the Central Region being the least cost efficient (5%) and the Eastern Region being the most efficient (58%). Though all the indicators of outreach were insignificant, the average loan per savings indicated that MFIs lent about two times the size of a client's savings deposit. This is an indication that MFIs still concentrate on serving more poor clients and does not suggest, "mission drift". The size of the average loans per savings ratio also shows that the sizes of loans are relatively small indicating depth of outreach. The drivers of inefficiency in this study include asset size and savings portfolio. While the savings portfolio reduces inefficiency by about 39%, larger asset size increases inefficiency by 45%.

7.2.2 Determinants of willingness to participate and pay for health insurance through MFIs

On households' behavioral intention, the analysis revealed that, households in the Northern region (Tamale Metro 50.0%; West Mamprusi 42.4%) have a stronger behavioral intention towards health insurance than those in the Greater Accra region (La-dadekotopon: 36.7%; Shai-Osudoku: 32.6%). With regard to the theory of planned behavior, attitude was stronger in West Mamprusi than the other districts under study. Perceived Behavioral Control was strongest in Tamale Metro while Subjective norm was lowest in La-dadekotopon.

The ordered logit regression estimates reveal that, the socio-psychological, socio-demographic, economic as well as other household specific factors influenced behavioral intention towards health insurance. In the Greater Accra region, the major determinants of behavioral intention are attitude, perceived behavioral control, subjective norms, age (65+),

formal sector employment, household size, episode of illness, source of treatment, frequency of hospital visits, health insurance status and wealth. The major determinants of behavioral intention in the Northern region includes attitude, PBC, sex, formal sector employment, education, frequency of hospital visits, health insurance status and wealth. For the entire study, attitude, PBC, ethnicity, sex, household size, education, frequency of hospital visits, source of treatment, health insurance status and wealth are the determinants of behavioral intention. For instance, large household size has a positive influence on behavioral intention in the Greater Accra region and the entire study area, while receiving treatment from a source other than a doctor has a negative influence on behavioral intention in the two regions and the entire study area.

The binary logit regression estimates show that the determinants of willingness to participate in the Greater Accra region include, attitude, sex, age, marital status, household size, education, frequency of hospital visits and source of treatment. In the Northern region, the factors that determine participation include attitude, PBC, ethnicity, gender, age, marital status, education, frequency of hospital visits, source of treatment and health insurance status. For the entire study, attitude, PBC, ethnicity, gender, age, informal sector employment, education, frequency of hospital visits, source of treatment, health insurance status and wealth.

In order to estimate willingness to pay for health insurance through an MFI, the Contingent Valuation method was used to elicit willingness to pay. The mean WTP for the entire study is GH₵40.00. It is relatively higher in the urban districts (La-Dadekotopon- GH₵45; Tamale Metro- GH₵40) compared to the rural districts (Shai-Osudoku- GH₵35; West Mamprusi- GH₵27.5). The average WTP was however the same in both the Northern and Greater Accra regions (GH₵40).

The factors that determine the amount households are willing to pay in the Tobit regression model shows that, subjective norms, ethnicity, age, household size, source of treatment, last episode of illness in the household and wealth are the significant determinants of willingness to pay for the entire study area. The main determinants of WTP in the Greater Accra region are subjective norms, ethnicity, age, source of treatment, last episode of illness in the household and wealth while the determinants of WTP in the Northern region include subjective norms, age, household size, hospital visitation, last episode of illness in household and wealth. For instance, subjective norms which is the perceived social pressure increases willingness to pay for health insurance through MFIs by GH₵11.58 in Greater Accra, GH₵6.33 in the Northern region and GH₵10.36 in the entire study area. Whiles having the last episode of illness in the household was within the past three months reduced WTP by GH₵32.45, GH₵29.28 and GH₵26.40 in the Greater Accra, Northern and the entire study area respectively.

7.2.3 The role of MFIs in the health financing structure

The study identified five major actors in the health-financing sector: the government of Ghana, the donor community, Civil Society Organizations and NGO's, the private sector and households. These actors can be broadly categorized into state actors and non-state actors. These actors play different roles in the health financing space however, government reserves considerable power in the formulation of health financing policy and the facilitation of dialogue between the government and the other actors. They decide who to engage and how much space and opportunity should be offered to an actor. The private actors focus on providing health facilities, private insurance and loans for the financing of health care.

The Microfinance sector forms part of the private sector and their core mandate is to provide small savings and loans opportunities for economically active poor people. However, in order

to cope with the competition in the sector, the fast-changing regulatory environment and the challenges that their clients face in assessing financial services, MFIs have found innovative ways of providing complementary services to their clients. Consequently, some MFIs in recognition of the effects of ill health on the performance of their clients have designed savings and loans products for health care. Whiles some MFIs have fashioned out health loans and savings products, others are collaborating with private insurance companies to provide health insurance to the clients. Others simply prompt their clients when their NHIS subscription expires or renew it on the client's behalf and make deductions from their accounts.

Though most of these services fall outside their core mandate and happens on the blind side of the regulator, it shows how responsive MFIs are to the needs of their clients and it also shows that they can effectively collaborate with other actors in the provision of the NHIS to their clients. Most MFIs suggest that it becomes a requirement for all clients to role unto the NHIS before they can access MFI services. Majority also suggest that the NHIS be offered as a savings product instead of a loan product so that the additional cost of service will not be too high. MFI's will submit the names of clients who want to renew membership or register to the District NHIA office together with the premium because NHIA does not recognize partial payments.

In order for MFIs to play this facilitating role, the Bank of Ghana, GAMC, the MOH and the NHIA have to draw a Memorandum of Understanding to guide the whole process of collaboration. A clearly spelt out policy and terms of reference, stakeholder engagement, regulation enforcement, advocacy/awareness creation, technology, price, trust and location are the factors that must be considered in order to ensure the success of the collaboration.

7.3 Conclusion

In general, Microfinance institutions have already found innovative ways of helping their clients cope with health-related expenses through the provision of health-related savings and loan packages and micro-insurance. Their innovativeness in designing these products and collaborating with micro-insurance companies to provide some form of insurance shows that they can effectively play the role of facilitators in providing the NHIS to their clients and the general public. This role will not take them out of their core mandate but rather offer them the opportunity to ensure that the productivity of their clients is not affected by ill health. The only challenge is that they are over represented in urban areas and the Greater Accra region especially. This may limit the influence in the rural areas where poorer households are concentrated.

Households generally have a good behavioral intention towards health insurance and are willing to pay GH₵40.00 on average as premium for NHIS offered through MFI's. Differences in household characteristics however influences the amount households are willing to pay. For instance, urban households are willing to pay more than rural households. A flat premium that is too high for most poor people will exclude such population and one that is too low may limit the amount of resources realized from the payment of premium.

MFIs in Ghana are generally inefficient though they seem to concentrate on the core activity of providing financial assistance to the poor. This means that MFIs are still a good avenue to reach poor segments of the population especially in the informal sector.

In sum, this study found that MFI's can serve as a platform to reach more people in the informal sector with the NHIS because they have found innovative ways of providing health related products for their clients. Households are willing to participate and pay more for the MFI-led NHIS package, which ensures payment of the premium in installment. The general

positive behavioral intention towards health insurance will ensure the consistent renewal of membership and consequently, the sustainability of the scheme. The willingness of households to pay more means that the resources pooled from premium payment will increase and thereby increase health financing.

7.4 Recommendations

To use Microfinance institutions as a platform, there is the need for a strong policy and regulatory framework, which clearly spells out the role of each stakeholder. This would ensure that all the actors involved play their part. Inadequate policy regulation leads to a lack of standardization in the implementation of policies, which may lead to MFIs interpreting the policy in their own way and adopting it to suite their purposes. This will affect the publics' experience of the policy and its subsequent adoption.

Households must be seen as important stakeholders in setting premium and involved in policy dialogue through mechanisms such as town hall meetings, road shows, focus group discussions, radio and television phone in programmes and designated contact numbers. This will allow for adequate customer engagement and participation in the decision-making process fostering ownership and legitimacy.

Premiums should be actuarially determined with the characteristics of segments of the population in mind. This will ensure that people pay premiums that resonant with their economic status. A short-standardized questionnaire can be developed to screen new subscribers, in order to know which segment of the population they fall under to determine their actual premium. This will ensure that the NHIS reflects its social equity agenda.

The Bank of Ghana must intensify its regulation and monitoring of the Microfinance sector in order to streamline their activities. Regular monitoring will make them follow the banking

rules and regulations, which will improve their efficiency. Also, government must organize capacity building training for MFIs on how to offer complementary services in order to reach a large proportion of people. This will help improve their source of cheap funds, reducing inefficiency. Government must also provide incentives for MFI's operating in rural areas to reduce the over concentration in urban areas. MFIs themselves must strive to improve efficiency by managing their asset base well and maintain portfolio quality in order to reduce inefficiency which will lead to sustainability.

Lastly, savings mobilization should be encouraged among MFIs because it reduces inefficiency and it provides the sector with cheap source of funds which will help them counter funding constrains.

7.5 Suggestions for further research

Based on the findings from this study, three areas are suggested for further study. The first is the need to engage the various actors in the health financing sector to ascertain the effectiveness of their respective roles. It would also be important to explore the nature and forms of Public-private partnerships in the health financing sector. Lastly, future studies should examine the effect of the 2019 Banking sector reforms on efficiency in the MFI sector.

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APPENDICES

Appendix 1: Interview guide for stakeholders

Informed Consent

Good Morning/ Afternoon. My name is Enyonam Adzo Doke and I am a student of the University of Ghana and working on my thesis titled: Health financing in Ghana: The role of MFI's in reducing health risks. The study is taking place in the Northern and Greater Accra regions of Ghana. I would like to ask you a few questions about the current health financing structure, the challenges in revenue mobilisation, the space for public private partnership in health financing and the role that microfinance institutions can play in improving health care financing in Ghana.

The responses and the information you provide will be treated strictly as confidential and will be used for academic purposes only. Your participation in this study is very important to enable me gather the relevant information needed for my research.

The interview will take about 45 minutes of your time. You are free to skip questions and stop the interview if you are not comfortable. You may also ask any question about this study if you so wish. Your signature/tomb print below indicates that you have decided to volunteer, as a research participant for this study, and understand the information I have provided so far.

Participant's Signature: _____ Date:

Investigator's Signature: _____ Date:

A: Interview Guide National Health Insurance Authority

BACKGROUND INFORMATION

Date and Time of Meeting…….

Name of Officer ……..

Position of Officer …….

Location …….

1. Give me an overview of the NHIA's identification with Ghana's health financing policy.
2. What are the policy concerns or gaps identified in the current structure of the NHIA?
3. How do you enroll people unto the scheme? Probe for location of offices, mobile offices/van, how they reach informal sector and hinterlands.
4. What challenges have you faced with resource mobilization? Probe the case of premiums from the informal sector workers, what percentage of total resources they contribute?
5. What is the major reason for low collection of premiums?
6. How do you think revenue mobilization can be increased from the informal sector? (What interventions/innovations have been introduced /did it work; are there different payment arrangements for urban/rural settlers; Issues of cost recovery?)
7. Is the general population involved in the setting of user fees/prices?
8. What is the perception of the NHIA on the inability of people to pay for NHIS?
9. What are the opportunities for sustainable financing?
10. How do you think the private sector and in this case MFI's can be enrolled to serve as collaborators in mobilizing revenue in Ghana for the financing of health?
11. What form do you think such a collaboration should/would take?
12. What costs and benefits do you think will come out of such a collaboration? Probe for specific features considered cost or benefits
13. What factors do you consider necessary to make such collaboration successful?

Thank you very much, is there anything else that we haven't discussed that you wished we had?

B: Interview guide for CSO's/Donor's

BACKGROUND INFORMATION

Date and Time of Meeting…….

Name of Officer ……..

Position of Officer …….

Location …….

1. Briefly give an overview of key policy aspects of Health Financing in Ghana.
2. What is the institutional structure for health financing in Ghana? (Where do CSO's/Donor's sit in this structure? What is their role? Have they been able to play their role effectively? What are the challenges?)
3. In your opinion what are the major issues affecting health financing in Ghana?
4. What is the government's attitude towards health financing and the other actors in the health financing space?
5. In your experience, what solutions /interventions have already been tried to resolve these problems? Probe: Did the solutions work? Why or why not?
6. What role can the non-state sector/ Private sector/MFI's play in health care financing in Ghana. Probe for past or future attempts
7. What intervention will make the biggest difference to improve revenue mobilization/financial accessibility of the poor to health care?
8. What factors do you consider necessary to the success of a collaboration between government and the private sector/MFI's?
9. What other recommendations can you give to improve the current financing mechanism?

Thank you very much, is there anything else that we haven't discussed that you wished we had?

C. **Interview Guide for Ministry of Health**

BACKGROUND INFORMATION

Date and Time of Meeting…….

Name of Officer ……..

Position of Officer …….

Educational status ……..

Location …….

A: Current health financing policy and practice in Ghana

1. Briefly give an overview of key policy aspects of Health Financing in Ghana.
2. What is the institutional structure for health financing in Ghana?
3. What is the current and future financing system for the NHIS with regard to:
   a. Sources of financing
   b. Financing arrangements (contracting relationships)
4. What are the policy challenges that face the health financing sector in raising revenue now and what do you envisage in the next 5-10 years?
5. In your opinion what are the major issues affecting health financing in Ghana?
6. In your experience, what solutions /interventions have already been tried to resolve these problems? Probe: Did the solutions work? Why or why not?

B: The role of MFI's

7. What role can the non-state sector/ Private sector/MFI's play in health care financing in Ghana. Probe for past or future attempts
8. What intervention will make the biggest difference to improve revenue mobilization/financial accessibility of the poor to health care?
9. If the government was to bring on MFI's as collaborators, where in the formal health financing structure will they fit?
10. What factors do you consider necessary to make such a collaboration successful?
11. What regulatory framework do you think will ensure the smooth running and success of this collaboration? (Probe for specific things legislation should address for such a collaboration to be successful)

Thank you for your time, is there anything else that we haven't discussed that you wished we had?

D: **Interview Guide for MFI's/GAMC**

BACKGROUND INFORMATION

Date and Time of Meeting…….

Name of Officer ……..

Position of Officer …….

Educational status ……..

Location …….

A: General information on core mandate

1. What is the core mandate of MFI's?
2. How has this mandate changed if it has and what have you added that is not originally part of MF operations?
3. How do you reach millions of people in the informal sector? Probe methodologies that work.

B: Effects of ill health on MFI's and micro health insurance

4. How does ill health affect the performance of your clients?
5. How do you think you can help them mitigate the health financing challenges they face?
6. Do you have any micro insurance product for health? How does it work?

C: Health financing collaborative role

7. Do you think MFI's could help reduce health risk by collaboration with NHIS to offer health insurance?
8. How do you think you can help?
9. What kind of product will you suggest in this case and how do you envisage it working?
10. What are the benefits to such collaboration?
11. What is the cost to such collaboration? (Probe: how much it will cost to add the additional function to the work of officers).
12. What elements will you consider important to the success of this collaboration?

In conclusion, is there anything else that we haven't discussed that you wished we had?

Appendix 2: Focus Group Discussion Guide

1. How do you finance the health of your families?
2. Do you have any communal health financing system in place? (Probe: for the involvement of community leaders, how it is implemented etc).
3. What are some of the challenges identified with the NHIS?
4. What can be done to mitigate these challenges?
5. What do you think about a partnership between NHIS/Government and MFI's?
6. What form should this partnership take?
7. What factors do you think will influence people taking up health insurance through MFI's?
8. What factors do you also consider critical to the success of this collaboration?
9. What challenges do you envisage with this collaboration?

Thank you very much for your time.

Appendix 3: Household Questionnaire

Informed Consent

Good Morning/ Afternoon. My name is Enyonam Adzo Doke and I am a student of the University of Ghana and working on my thesis titled: Health financing in Ghana: The role of MFI's in reducing health risks. The study is taking place in the Northern and Greater Accra regions of Ghana. I would like to ask you a few questions about the current health financing structure, the challenges in revenue mobilisation, the space for public private partnership in health financing and the role that microfinance institutions can play in improving health care financing in Ghana.

The responses and the information you provide will be treated strictly as confidential and will be used for academic purposes only. Your participation in this study is very important to enable me gather the relevant information needed for my research.

The interview will take about 45 minutes of your time. You are free to skip questions and stop the interview if you are not comfortable. You may also ask any question about this study if you so wish. Your signature/tomb print below indicates that you have decided to volunteer, as a research participant for this study, and understand the information I have provided so far.

Participant's Signature: _____ Date:

Investigator's Signature: _____ Date:

HOUSEHOLD SURVEY

Household Information

HI. Cluster Number: __ __ __	HI2. Household Number __ __ __
HI3. Region/District	HI4. Area Rural…….1 Urban……2
HI5. Name of Community:	HI6. Interviewers Name:
HI7. Interview Date: / /	HI8. Time started: ____ ____
HI9. Status of Respondent in Household: Head……1 Spouse…….2 Other Adult…….3	HI10. Respondents ID: ____ ____

Household roaster: Please tell me the names of each person who usually lives here, starting with the head of household.

ID	Name	Sex	Age	Relhead	Marital status	Educational status	Ethnicity	Occupation	Religion
	Write complete list of all members of this household, starting with the HEAD of the household	**1.Male 2.Female 3. Other (specify)**	**Age in completed years (under1=0)**	**Relationship with current head of household. Code: 1=head 2=spouse 3=son/daughter 4=parent 5=other relative 6=unrelated**	**Marital status for members 15yrs and above). Code: 1=Never Married 2=Married 3=Consensual Union 4=Separated 5=Divorced 6=Widowed 7=Other (specify) 8=Not Applicable**	**Highest educational level. Code: 1=No education 2=Pre-school 3=Primary 4=Middle/JHS 5=Voc/Com/Tech 6=Secondary (SHS) 7= O' level 8=A' level 9=Training college 10=Post sec/nursing 11=Polytechnic 12=University 13=Koranic 14=Other (specify)**	**Code: 1=Akan 2=Ga 3=Ga Adamgbe 4= Ewe 5= Guan 6= Dagbani 7=Grussi 8=Grumma 9=Hausa 10=Gonja 11=Wala 12=Frafra 13=Other(specify)**	**For Household members with AGE 15 years and above.** 1=Trader 2=Artisan 3=Agriculturalist 4=Government sector employee 5=Private sector employee 6=Unemployed 7=Other (specify	**Code: 1=No religion 2=Atheist 3=Traditionalist 4=Muslim 5=Christian 6=Other (specify)**
	HL1	**HL2**	**HL3**	**HL4**	**HL5**	**HL6**	**HL7**	**HL8**	**HL9**
1(Head)									
2									
3									
4									
5									
6									

7									
8									
9									
10									
11									
12									
13									

General Health status and hospitalization (Reference period is the past one year)

Question	Responses	Code	Skip
GH1. What is your usual source of health care in the past one year?	Public Private Both	1 2 3	
GH2. What is your health status compared to your peers?	Better Similar Worse	1 2 3	
GH3. How do you treat yourself when ill?	See a doctor Chemist /Pharmacist Traditional medicine Self-medication Religious place Other (Specify)	1 2 3 4 5 6	
GH4. How often did you visit the clinic/hospital in the past one year?	At least once in a week At least once every fortnight At least once in a month At least once in three months At least once in six months At least once in a year Not sure/Don't remember	1 2 3 4 5 6 99	
GH5. Do you or any member of the household have a chronic condition?	Yes No	1 2	
GH6. When was the last time someone from this household fell sick?	Less than a week ago Within the past three weeks Within the past one month Within the past Three months ago Three months and above Don't know	1 2 3 4 5 99	
GH7. Have you ever been hospitalized?	Yes No	1 2	
GH8. Do you worry whenever	Yes	1	

there is a health expense to cover?	No	2	

Insurance status and behavior

Question	Responses	Code	Skip
IB1. Do you have health Insurance?	Yes No	1 2	 ➡ IB5
IB2. What type of Insurance?	Private Public Both	1 2 3	
IB3. How was your membership of the NHIS achieved?	Paid premium myself Premium paid by a relative or friend Premium paid by employers/SSNIT Exempt as indigent Paid through a financial Institution e.g. MFI Other (Specify)	1 2 3 4 5 6	
IB4. Why do you insure your health?	To prepare for unforeseen illness Employer insured for me Can afford it Other specify Don't know	1 2 3 4 99	
IB4b. From where/who did you hear of health insurance that encouraged uptake?	Through the media (radio, t.v. etc) Through a friend/ relative Through NHIS public education Other (specify)	1 2 3 4	
IB4bx. How much do you currently pay for health insurance yearly? (Amount in Ghana cedis)	Public…… Private…….. Total……		➡ KM1
IB5. Why don't you have any insurance?	Too expensive Don't need insurance Employer pays cost of health care No close facility in the area	1 2 3 4	

	Registration point too far No confidence in insurance schemes Other (specify) Don't know	5 6 7 99	
IB6. How do you handle unintended illnesses?	Pay out of pocket Borrow from family and friends Borrow from formal sources Sell Asset or property Don't Know	1 2 3 4 99	
IB6. How much did you pay to seek health care the last time any member of the family was taken ill in the last one year?	Amount…….		

Knowledge of MFI and their activities

Questions	Responses	Code	Skip
KM1. Have you heard of MFI's?	Yes No	1 2	 ➡PB1
KM2. What do they do?	They give loans to small businesses They go round to solicit savings from market women/small business They give financial services to the poor Other (specify) Don't know	1 2 3 4 99	
KM3. Have you ever joined an MFI before?	Yes No	1 2	
KM4. What was the nature of your involvement with them?	As a loan client As a savings client Both savings and loan client Other (specify)	1 2 3 4	

KM5. Do you still do business with them?	Yes No	1 2	➡KM7
KM6. If No why Not?	Their loans are too expensive They charge too many fees Don't trust them Can do without the loan now Other (specify)	1 2 3 4 5	
KM7. Do you think they have the capacity to reach people in the informal sector?	Yes No	1 2	
KM8. Can MFI's facilitate subscription to the NHIS?	Yes No	1 2	➡ KM9 ➡ KM10
KM9. If yes, how?	As a loan product As a savings product As both a loan and savings product As part of cooperate social responsibility Other (specify) Don't know	1 2 3 4 5 99	
KM10. If No, Why?	The NHIA agents are doing a good job They will charge extra for it They don't serve the very poor Other (specify) Don't know	1 2 3 4 99	

Questions to Test behavioral Intention

Please indicate which of these applies to you when it comes to health insurance by ticking the box

No.	Statements	Opinion				
Behavior		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
PB1. I regularly renew my premium						
PB2. I know my benefit package when I visit a health facility						
PB3. I know where to go for help if am experiencing challenges						
Intention						
PB4. I plan to renew my subscription every year as long as am satisfied with the services offered						
PB5. I plan to enroll all my household members						
Attitude						
PB6. Health insurance is something I need						
PB7. Health insurance is important for my health						
PB8. I am healthy enough, so I don't need health insurance						
PB9. Health insurance is not worth the money it costs						

PB10. Health insurance is important to my financial security					
PB11. Health insurance is something I can afford					
PB12. I know how and where to purchase health insurance					
Subjective norms					
PB13. My family thinks I should subscribe to a health insurance policy					
PB14. Opinion leaders in my community affect my decision to enroll					
PB15. If my neighbours take up health insurance, I will too.					
Perceived behavioral control					
PB16. The decision to take up health insurance is completely up to me					
PB17. Obtaining health insurance will be an easy thing					
PB18. I have complete control on deciding who is enrolled or not in this household					

Household preference and willingness to pay for health insurance through MFI's

Assume hypothetically that in future, the government of Ghana decides to institute a health insurance delivered through MFI's as a result of the inability of a large majority to pay the one time lump sum and also because of access to NHIS registration centres. Assume also that the government is offering two different types of NHIS (the traditional one and the collaborative one) with their attributes as follows:

Options	**Premium is paid**	**Benefits/services**	**Modalities for collection**
Traditional/current	Annually	Out-patient services In-patient services Oral Health Eye care services Maternity care Emergencies Pharmaceuticals	Annually/ NHIS/agent offices
Improved with MFI's	Annually	Out-patient services In-patient services Oral Health Eye care services Maternity care Emergencies Pharmaceuticals	Daily/weekly Mobile bankers

Question	Response	Code	Skip
HW1. Would your household be willing to pay for the improved NHIS?	Yes No	1 2	 ➡ HW7
HW2. If **yes**, what is the *maximum amount* of money per year that you will be willing to pay for this service given your current income and family situation? b.) Increase the initial bid by 5.00 Ghana	Amount……Ghana cedis (Starting bid given by respondent)		

cedis per annum till the respondent finally refuses to accept any more increases.	……. Ghana Cedis per annum (final bid by respondent)		
HW3. How much are you willing to pay in weekly instalments through MFI's?	Amount …….		
HW4. What would you do if prices were put at a point that you cannot pay?	Go without insurance Go for another insurance Don't know Other (specify)	1 2 99 88	
HW5. If you are to add a little token to the amount you agreed to pay (HW3) to cover the health insurance of your immediate family members, will it be worth it?	Yes it will be worth it No, it will not be worth it Don't know [ ]	1 2 99	
HW6. How much will you be willing to add?	Amount……		
HW7. If **no to question HW1**, could you please tell me the reason why your household does not want to pay anything for this improved NHIS?	We are poor and we cannot pay The price is too high, otherwise I would pay I do not believe that this program would improve quality of services under NHIS We are satisfied with the current situation (it does not need improvement) Health care must be provided by the government Other (specify):	1 2 3 4 5 88	

Key success factors

Question	Responses	Code	Skip
KSF1. What factors do you think will lead to the success of the proposed health insurance? (Tick as many as are applicable)	Bureaucratic, legal enforcement and regulation Price Trust Social network/social structure Information dissemination/PR Value of insurance Quality of healthcare (provision and coverage) Political will of stakeholders IT and administration Other (specify) Don't know	1 2 3 4 5 6 7 8 9 10 99	
KSF2. Which of these factors is the most important?	Bureaucratic, legal enforcement and regulation Price Trust Social network/social structure Information dissemination/PR Value of insurance Quality of healthcare (provision and coverage) Political will of stakeholders IT and administration Other (specify) Don't know	1 2 3 4 5 6 7 8 9 10 99	
KSF3. Which is least important?	Bureaucratic, legal enforcement and regulation Price Trust Social network/social structure	1 2 3 4	

	Information dissemination/PR Value of insurance Quality of healthcare (provision and coverage) Political will of stakeholders IT and administration Other (specify) Don't know	5 6 7 8 9 10 99	
KSF4. What challenges do you envisage?	High Interest rate The reputation of MFI's Inability to pay Other1 (Specify) Other 2 (Specify) Don't know	1 2 3 88 89 99	

Assessing household income and Ability to Pay

QUESTION	RESPONSES	CODE	Yes or No
AP1. Does your household own and is in good condition:	Electricity Piped water Flush toilet Radio TV VCR/ Home theatre, DVD Telephone Motor bike Bicycle Mobile phone Computer Box iron Electric iron Standing fan	1 2 3 4 5 6 7 8 9 10 11 12 13	

	Sewing Machine	14	
	Freezer	15	
	Refrigerator	16	
	Gas stove	17	
	Electric stove	18	
	Kerosene stove	19	
	Coal pot	20	
	Furniture	21	
	Mattress	22	
	Livestock	23	
	Car/pick-up, truck	24	
	Other (specify)	25	

AP2. What was the household's total income last year? Amount (GHS) ……..

AP3. Allocate source(s) of income by contributor(s)?

ID	Employment	Farm-income	Non-Farm self employment	Rental	Remittances	Other income	Total
AP3							
AP4							
AP5							
AP6							

Household dwelling characteristics

QUESTION	REPONSES	CODE	YES OR NO
AP7. How many rooms in the household are used for sleeping?			
AP8. What is the main construction material used for the dwelling floor?	Earth/Mud Dung Wood planks Palm/bamboo Parquet or polished wood Vinyl or asphalt strips Ceramic tiles Cement/Concrete Carpet Other (specify)	1 2 3 4 5 6 7 8 9 99	
AP9. What is the main material used for the roof?	No roof Thatch/Palm leaf Sod Rustic mat Palm/Bamboo Wood planks Card board Metal/Tin Wood Calamine/cement fibre Ceramic tiles Cement Roofing Shingles Asbestos/Slate/Ceramic tiles Other (Specify)	1 2 3 4 5 6 7 8 9 10 11 12 12 14 99	
AP10. What is the	No walls	1	

main material of the exterior walls?	Cane/Palm/Trunks	2	
	Mud bricks/earth/dirt	3	
	Bamboo with mud	4	
	Stone with mud	5	
	Uncovered Adobe	6	
	Plywood	7	
	Cardboard	8	
	Reused wood	9	
	Cement	10	
	Stone with lime/cement	11	
	Bricks	12	
	Cement blocks	13	
	Covered adobe	14	
	Wood planks/shingles	15	
	Other (Specify)	99	
AP11. What type of fuel does your household mainly use for cooking?	Electricity	1	
	Liquefied Petroleum Gas (LPG)	2	
	Natural Gas	3	
	Biogas	4	
	Kerosene	5	
	Coal/Lignite	6	
	Charcoal	7	
	Wood	8	
	Straw/shrubs/Grass	9	
	Animal dung	10	
	Agricultural crop residue	11	
	No food cooked in Household	95	
	Other (Specify)	99	
AP12. Is the cooking done in the house, in a separate building or outdoors? If in the	In a separate room used as kitchen	1	
	Elsewhere in the house	2	
	In a separate building	3	
	Outdoors	4	

house	Other (Specify)	99	
AP13. What type of toilet facility does this household use?	WC in dwelling (not shared by other households) WC in another household/shared by other households Public water closet Ventilated Improved Pit Latrine (not shared) Ventilated improve Pit Latrine (Shared) Unimproved Pit latrine types (not shared) Unimproved pit latrine (Shared) Public KVIP Composting toilet Pan/Bucket Hanging toilet/Hanging latrine No facility/bush/field Other (Specify)	1 2 3 4 5 6 7 8 9 10 11 12 99	
AP14. What is the main source of lighting for the dwelling?	Generator Kerosene Gas lamp Candles/Torchlight Electricity Solar energy Other (specify)	1 2 3 4 5 6 99	

Appendix 4: MFI Questionnaire

Measure of Efficiency Questionnaire

Type of MFI:

1. Microfinance company
2. Rural Commercial Banks
3. Savings and Loans
4. Financial NGO
5. Micro-credit

Number of years in operation:

Region(s)/Districts of operation:

The indicators below are to help calculate the efficiency of the different types of MFIs in the sector. The data is being collected on the four quarters of the year 2019. Please, do fill the indicators for each quarter.

	Indicators	2019 1st Quarter	2019 2nd Quarter	2019 3rd Quarter	2019 4th Quarter
1	Gross Loan Portfolio				
2	Operational cost				
3	Financial cost				
4	Interest on deposits				
5	Personnel expense				
6	Administrative expense				
7	Total Asset				
8	Total savings (voluntary deposits)				
9	Total loans				
10	PAR>30 days				
11	Total number of clients				
12	Number of active borrowers				

13	Number of female borrowers				
14	Number of savers (depositors)				
15	Number of staff				
16	Number of loan officers				
17	Average loan size				
18	Average savings balance				
19	Loan loss provision				
20	Return on Asset				

Thank you for your time and contribution.

UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)

P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No.....

18th May, 2018

Ms. Theresa Enyonam Adzo Doke
Institute of Statistical, Social and Economic Research (ISSER)
University of Ghana
Legon

Dear Ms. Doke,

ECH 135/17-18: HEALTH FINANCING IN GHANA: THE ROLE OF MICROFINANCE INSTITUTIONS IN REDUCING HEALTH RISK

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date:	17/05/19
On Agenda for:	Initial Submission
Date of Submission:	19/03/18
ECH Action:	Approved
Reporting:	Bi-Annually

UG/ISSER/ECH VALID UNTIL 17 MAY 2019 APPROVED DOCUMENT

Please accept my congratulations.

Yours Sincerely,

Rev. Prof. J. O. Y. Mante
ECH Chair

CC: Prof. Felix Asante, Institute of Statistical, Social and Economic Research (ISSER), University of Ghana.

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