

**The Ghana National Health Insurance Policy: Evaluation of Equity of Coverage and
Financial Sustainability**

by

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Abstract

One of the overarching objectives of initiating and implementing public policy is to enhance and advance the welfare of citizens. It is in this disposition that the Ghana government in 2003 initiated a universal health insurance policy to alleviate the health needs of its growing population. It is also apparent that it is one thing initiating a policy and implementing it, and the other, ensuring that the policy meets or attains its intended objective. The Ghana National Health Insurance Policy has been operational for almost a decade; it is therefore incumbent that the policy is empirically examined to ascertain whether it meets its purported objective.

To achieve its objective, the policy must as much as possible cover a wide section of the Ghanaian population, and must also be capable of sustaining itself financially. This study deployed a mixed method approach to examine whether the Ghana National Health Insurance Policy is equitable in terms of coverage and capable of financially sustaining itself. Data to provide answers to questions posed for the study were extracted through survey of both beneficiaries and non-beneficiaries of the program in selected regions of Ghana. Administrators of healthcare organizations were also quizzed on how their organizations interface with the implementing agency as it relates to reimbursement for services rendered to enrollees. Records of the implementing agency were also thoroughly scrutinized to determine its financial strength and how often it reimburses healthcare providers for services rendered to clients.

The study utilized binary logistic analysis to ascertain whether the policy is equitable in terms of coverage. To satisfy equity requirement of the study, the various demographic makeup

[determinants of equity] of the Ghanaian population was captured on a questionnaire to verify whether the program made room for citizens of different demographic groups. Depth of coverage [benefit package] of the program was also captured on the questionnaire, and included in the logistic analysis. Regression analyses are run to unravel why eligible citizens fail to sign up for the program, and whether the program is or was capable of sustaining itself financially.

Content analysis to establish financial viability of the program is undertaken on materials extracted from the records of the implementing agency, and interviews of the selected healthcare providers' representatives.

Finally, similar policies in selected countries of the world are incorporated into the study to serve as benchmark for critically analyzing the Ghanaian program.

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List of Abbreviations

| | |
|--------|--|
| BI | Bamako Initiative |
| CANAM | Caisse Nationale d'Assurance Maladie des Professions Independentes |
| CBHI | Community Based Health Insurance |
| CNAMTS | Caisse Nationale d'Assurance Maladie des Travailleurs Salaries |
| DMHIP | District Mutual Health Insurance Program |
| FONASA | National Health Fund |
| GDP | Gross Domestic Product |
| IBRD | International Bank for Reconstruction and Development |
| IMF | International Monetary Fund |
| ISAPRE | Institutos de Salud Previsional |
| LTC | Long-term Care |
| MMI | Military Medical Insurance |
| MSA | Mutualite Sociale Agricole |
| NCHIF | National Citizen's Health Insurance Fund |
| NHI | National Health Insurance |
| NHIA | National Health Insurance Authority |
| NHIF | National Health Insurance Fund |
| NHIL | National Health Insurance Levy |
| NHIP | National Health Insurance Program |

| | |
|----------|--|
| NHS | National Health Service |
| PCHIP | Private Commercial Health Insurance Program |
| PMHIP | Private Mutual Health Insurance Program |
| PPACA | Patient Protection and Affordable Care Act |
| RAMA | Rwandaise D'assurance Malaidie |
| SEREMENA | Servicio Medica Nacional de Empleados |
| SNS | Servicio Nacional de Salud |
| SSNIT | Social Security and National Insurance Trust |
| UHIC | Universal health Insurance Program |
| WHO | World Health Organization |

Chapter I: Introduction

Healthcare policy gained prominence in the systematic agenda of most countries during the late twentieth and early twenty-first centuries, with citizens of nations clamoring for universal health insurance coverage (UHC). UHC had broad political and social appeal to many in the developed and developing world. For some, it was an issue of social equity; for others, it was more a promise of better health. Lack of UHC was tagged with increased morbidity and mortality rates within communities across most nations of the world (Adolino and Blake, 2011).

The preference of UHC as a method of healthcare financing over other means of financing health needs of citizens is because it serves as, and provides a stable source of revenue, a visible flow of funds, and risk pooling with mutual support. UHCs are provided mostly by governments, and can also be established independently from governments, but under the regime of regulated government policy so as to safeguard citizens who enroll into programs (Barnighausen and Sauerborn, 2002). The major drawback to health insurance programs is its lack of ability to incorporate and sign on members of the informal sector [segment of economy not controlled and regulated by government] in most developing countries, and the lack of ability to control cost for most countries of the world.

Ghana's Health Profile

Ghana has a total population of 24,223,431 with its female population constituting 51.2 percent while its male population represents 48.8 percent (2010 Population and Housing Census). Ghana has a population growth rate of 2.6 percent and a fertility rate of 4.0. An estimated 50 percent of the population lives in rural areas. The nation is divided into ten

administrative regions, which are further divided into 170 district assemblies (Ghana Health Profile, 2012). Its national income per capita is \$1250 (2010 estimates). The country's health profile has characteristics of most low income countries, especially those in sub-Saharan Africa. Communicable diseases constitute the major causes of morbidity and death. Malaria accounts for 40 percent of outpatient visits and has a high mortality rate of 13 percent. Other death causing diseases include respiratory tract infections, diarrhea, anemia, skin diseases, ulcer and hypertension. Yellow fever and meningitis are also major public health concerns in Ghana (Chankova, Atim and Hatt, 2010).

Though the subject matter of this study dwells on universal health insurance coverage, it is important to provide the state of affairs of the Ghana health system vis-à-vis health systems in other countries. The Ministry of Health, the institution charged with responsibility of overseeing health related issues in Ghana, in its press release of March 2012, states that "Bill Gates was in Ghana for the first time to learn about the health system and indicated that his foundation wanted to replicate Ghana's experience in other countries. The release adds that, Gate was of the view that Ghana's commitment to rigorously gathering and analyzing data, holding district level health officials accountable and reaching out into the communities through its Community-Based Health and Planning Services strategy have resulted in high levels of vaccine coverage."

The World Health Organization's (WHO) 2013 report states that Ghana has 1.4 hospitals per 100,000 population and nine beds per 10,000 populations as against the African region average of .9 hospitals per 100,000 populations and no figure for hospital beds for the African region.

WHO also provides significant state of affairs [indicators] of the Ghana health system. The risk factor of Ghana which is the percentage of the population having access to improved drinking water sources is 86 percent (2011) , improved sanitation is 13 percent (2011); and children less than five years underweight and overweight as 14.3 percent and 5.9 percent respectively for the years 2005-2012. The African region average for improved drinking water source and improved sanitation for same year are 64 percent and 34 percent respectively. Thus, Ghana does well for sources of improved drinking water for its citizens than it does for sanitation. The African region underweight and overweight figures are 25.2 percent and 7.9 percent respectively, indicating Ghana is excelling when it comes to controlling under and overweight children under five years old. The life expectancy at birth is 57 and 64 for 1990 and 2011 respectively (2013 World Health Statistics).

The Healthcare System

Ghana's first public hospital, the Korle Bu Teaching Hospital was established in 1923 by the British during colonial rule. Services provided to clients at Korle Bu during this period were limited to European colonialists and merchants including their workers. In subsequent years, more health facilities were established to serve and promote the interest of the colonialist by taking care of the health needs of indigenous Ghanaians who indirectly produced goods to feed British markets and industries. At independence in 1957, the sole responsibility of meeting the health needs of citizens, and running health facilities across the nation became the singular prerogative of the Ghanaian government. Financing health needs of Ghanaians became part of

the government's annual budget, thus, healthcare services in all health institutions across the nation became free for all Ghanaians (Adu-Oppong, Kisiwaa-Ameyay and Addai, 2010).

Healthcare financing took a different turn in the 1980s and beyond. The Ghanaian budget could no longer support free healthcare services for all citizens due to the economic depression of the time. The country experienced a balance of payment deficit and therefore had to fall on external financiers for aid. The government at the time turned to the International Bank for Reconstruction and Development (IBRD), and the International Monetary Fund (IMF) for assistance. As a prerequisite to receive assistance from these institutions, the government had to abide by conditions put forward by the two bodies. Conditions included scaling down on social spending including reducing expenditure on healthcare financing. Adhering to conditions put forward by IBRD and IMF had a serious repercussion on accessing healthcare services by a majority of Ghanaians, especially the poor and the vulnerable.

Apart from the IBRD and the IMF requirements, in 1988, the Bamako Initiative (BI) enjoined governments of African nations to adopt and institute user fees for their citizens who access healthcare services. The stated intent of BI was to make extra resources available to governments to upgrade and expand on existing structures so that more patients could be cared for. It was also intended to deter people who abused the free system that existed across most Africa nations after independence. The IBRD and IMF conditions; and BI culminated in what became known as “cash-and-carry” system in Ghana.

Cash-and-carry required patients to pay upfront before they could be treated. At this point, the Ghanaian government's budget allocation for free medical care was truncated (Adu-

Oppong, Kisiwaa-Ameyay and Addai, 2010). Cash-and-carry system diverted healthcare delivery services from a significant proportion of Ghanaians; this category of citizens included the disabled, the poor, accident victims, children and a host of other helpless groups. Thus patients who could not afford to pay for healthcare services were literally asked to go home and die. Cash-and-carry system also imposed a two-tier health delivery service based on ability to pay: the poor were priced out of formal [government regulated hospital] or orthodox health facilities and the rich who were in the minority became the sole users of formal healthcare delivery system because they could afford to pay for services provided to them by health institutions.

Cash-and-carry aside, other factors hindered the delivery of equitable healthcare services throughout Ghana. Inequality exists between urban and rural areas in healthcare delivery, thereby impacting on health outcomes. Health facilities in urban areas are better resourced, equipped and staffed than those located in rural areas. The inequitable distribution of healthcare resources including personnel affected health outcome throughout the country. Positive health outcomes in urban areas far outpaced those of rural areas. The differences in health services delivery between urban centers and rural areas further strengthened the call for major healthcare reforms in the country (Asenso-Okyere, 1995).

Thus the amalgamation of issues including the political climate [democratic proclivity] of the time, cash-and-carry, and the inequitable distribution of healthcare resources across the country with its attendant debilitating effect on citizens, led the government of Ghana to legislate into being the National Health Insurance Policy (Act 650). Act 650 was passed with the hope of

easing the financial burden borne by individual households when accessing healthcare delivery services.

The Ghana National Health Insurance Policy

To alleviate the plight of citizens especially the poor and the most vulnerable in accessing and utilizing healthcare services, the new democratically elected Ghanaian government in 2003 through Act 650 passed a health insurance policy known as the National Health Insurance Act, otherwise referred to as the National Health Insurance Policy (NHIP). The policy is inclined to social health protection through risk equalization, cross subsidization, solidarity, equity and quality care (Gobah, and Liang, 2011).

The NHIP is mandatory for all citizens. The essence is to pool together cumulative risk associated with health financing by way of a national health insurance system (both private and public) that could alleviate the exposure to high cost of health financing that is beyond the reach of most Ghanaians (Adu-Oppong, Kisiwaa-Ameyay and Addai, 2010). The policy is the amalgamation of traditional social health insurance and mutual health insurance programs. At the apex of the program is the national secretariat, known as the National Health Insurance Authority (NHIA), charged with the responsibility of harnessing contributions from the formal sectors [segment of economy controlled and regulated by government] of the country. Countrywide, 145 insurance funds [district offices] are created to cater for citizens within other sectors of the nation. Act 650 allows for the creation and running of three types of insurance schemes: District Mutual Health Insurance Programs (DMHIP), Private Commercial Health Insurance Programs (PCHIP), and Private Mutual Health Insurance Programs (PMHIP). Citizens are required by the

Act to sign up with any of these categories of insurance bodies (Chankova, Atim and Hatt, 2010).

The NHIP is financed by a National Health Insurance Levy (NHIL), made of 2.5 percent value added tax levied on specified goods and services; 2.5 percent Social Security and National Insurance Trust deductions from the formal sector; and premiums from the informal sector, and government budgetary allocations. Funds from these sources are provided to only the DMHIP to subsidize for registered members within their jurisdictions, the other programs do not attract funding from the NHIL. Children under 18 years of age, adults above 70 years and indigents are exempt from paying annual premiums. Citizens who fall outside these groups and workers of the formal sector are the main contributors to the fund (Act 650).

The NHIP provides a wide generous benefit package, covering more than 95 percent of the disease conditions that afflict citizens. Minimum benefit packages under the NHIP include general out-patient and in-patient care, oral health, eye care, comprehensive child delivery care, diagnostic test, generic medicine and emergency care. To access the NHIP, beneficiaries are required to stick to a gatekeeper rule: first seek services from primary care centers, and proceed to a second and third level upon advice from a primary physician. The crux of gatekeeper rule is to avoid unnecessary expenditure and waste of financial resources. To become a member of a DMHIPS and benefit from the program, citizens are required to register with the nearest district mutual program or through an agent, and wait for six months to use the service. Payment of a required premium and registration fee is mandatory for those not exempt (Chankova, Atim and Hatt, 2010).

Private and public health organizations are qualified under Act 650 to provide services to card holders of DMHIPS. But such organizations must first seek accreditation with the NHIA before they can dispense their services to registered clients. Pharmacies, licensed chemical shops and diagnostic laboratories are also required to register with the NHIA before they can provide their services to clients, and benefit from insurance claims. All providers are expected to offer a minimum package of services to card holders who patronize their facilities (Witter and Garshong, 2009).

Equity of Coverage as Key to Success

Most countries across the world are turning to health insurance as a means of ensuring access to healthcare for their citizens, and protecting them from financial risk. Ease of access to healthcare providers by citizens is attained through implementing health insurance policies through multiple contributions, with governments targeting funds toward subgroups of population, and making all subgroups contribute proportionally toward health insurance programs—a phenomenon that ensures equity (Yip and Berman, 2001).

Equity in health is the absence of systematic disparities in health between social groups with different underlying social advantages and disadvantages. Equity in healthcare finance is measured by the degree of inequality in paying for healthcare between households of unequal ability to pay. Inequity in health is the effect of differential distribution of other determinants of health including access to health, which hinges on finance, the bane of many people across nations (Orem and Zikusooka, 2010; Yu, Whynes and Sach, 2008). Thus, the intent of health financing is to make resources available, as well as setting the right financial incentives for

providers to allow all citizens access to effective health and personal healthcare. To facilitate access to healthcare services for all citizens, three interrelated role of healthcare financing are crucial: revenue collection, pooling of resources, and purchasing of interventions. Out-of-pocket expenditure should be a last resort as it predisposes the poor and vulnerable to catastrophic consequences.

Equity in healthcare coverage may be construed as ensuring utilization in accordance with need, and payments in accordance with ability to pay. Considering that ill health impacts the poor disproportionately, maintaining payments before one is provided healthcare services will result in the poor and vulnerable suffer heavy financial repercussion and deterioration in illness (Roy and Howard, 2007; Yip and Berman, 2001). Equity in universal health insurance policy or social health insurance therefore, implies making provision for citizens who cannot afford financial coverage to be brought under insurance programs, so as to make the poor and vulnerable capable of accessing and utilizing healthcare services when the need arises. Equity is also measured as value judgment based on degree of inequality acceptable for individuals or society. Equity is determined to a large extent by its structure: extent of population coverage, structure of contribution rate, earnings limits on contribution, contribution shares between employees and employers (Yu, Whynes and Sach, 2011). To be equitable then, insurance policies must meet the determinants so as not to be seen as discriminatory, especially to the poor and the vulnerable.

Equity is multidimensional and linked to equal access to available care services for equal need, and equal quality services of care for all. Specific designs of health insurance coverage

may impact on equity as it affects citizens: access and utilization of healthcare services (Liu et al., 2012). Health insurance coverage should be carved to facilitate equity—disadvantaged groups should be able to benefit from health insurance in terms of improved access to services. The impact of health insurance should take into account utilization and financial protection for citizens who cannot afford premium and service payments.

WHO adds another dimension to equity. In 2005, WHO member states adopted a resolution encouraging countries to develop sustainable and equitable health financing systems capable of achieving universal coverage. It considered universal healthcare coverage to include securing access to adequate healthcare for all at affordable rates (McIntyre et al., 2008; Orem and Zikusooka, 2010).

Coverage must take into account fragmentation in healthcare provision and financing to take care of various socioeconomic subgroups. Fragmentation refers to the existence of a large number of separate funding mechanisms and a wide range of healthcare providers paid for from different funding pools—reducing the risk of funding from one source. The advantage of different funding pool is that, making different socioeconomic subgroups contribute proportionally to the fund makes resources available for the different providers to guarantee sustainability of health provision to clients.

Member states of WHO therefore agreed that to achieve the principle of equity of coverage, member states should embark on universal coverage through pooling risk to the greatest extent possible. The member states also determined that, for healthcare services to be guaranteed all persons, ability-to-pay should be the hallmark toward contributions to healthcare

services received. The use of healthcare services ought to be on the basis of need for care; and, user fees and other out-of-pocket payments must be reduced so every person has access to healthcare delivery services. Implementation of prepayment by way of UHIC should be increased in a way that maximizes the size of risk pool (McIntyre et al 2008).

Equity in health could also be ideally viewed as every citizen possessing a fair opportunity to attain their full health potential and that none should be disadvantaged from achieving this potential if avoidable. It therefore follows that equity is concerned with creating equal opportunities for health, and bringing health differentials down to the lowest level possible (Chang, 2002). Equity of health is also about providing and enhancing opportunities for all individuals to achieve their optimal health given their potential. Policymakers may provide this opportunity especially for the vulnerable through universal health insurance. As opportunities tend to be more deprived and less available to the disadvantaged than the advantaged; priority to the least advantaged in society may result in bringing health differentials down to the lowest level possible.

Chang cautions that need should not be the overriding principle of equity in health as advocated by egalitarians. Chang emphasis is that equity of coverage suggests, all individuals be provided equal opportunities to actualize their health potential regardless of whether the differentials between groups are narrow or wide. To overcome differentials, Chang avers that if it is possible to agree on which inequalities are avoidable, unnecessary and unfair, then it is possible to agree on inequitable that are inequities; then plans could be put in place to take care of such inequalities.

Furthermore, to assert certain inequalities as inequities, a normative appraisal is required. The most fundamental of which is biological; if biological differences are nonexistent that may explain observed variations in health status. Then it is probable that the variations in health status are caused by environmental [physical and social] factors, and hence are more amenable to human intervention. Therefore, it can be safe to attribute these inequalities in health to environmental, social, political, and economic policy differentials that are amenable to intervention, and hence are unnecessary and avoidable. If inequalities are unjust and unfair, then it is prudent to look at the policy dynamics within countries, and how it affects the health policy of nations.

Chang further endorses the fact that equity in healthcare including health insurance should not be based primarily, if not solely on the ethical principle of distributive justice, but must encompass fairness which captures efficiency, accountability, and autonomy of patients and providers. It is also conceivable that a system can be both equitable and at the same time inefficient or ineffective. Inequity may become a concern if benefits and costs are unequally distributed among different individuals or populations, in which case effectiveness and efficiency may become an issue of distributive justice and equity.

Amporfu (2013) differentiates between two forms of equity in healthcare financing, to wit, vertical and horizontal equity. Vertical equity financing entails contribution to health fund by individuals is proportional to ability to pay; and horizontal financing involves individuals of the same ability to pay contribute similarly to a fund. Vertical equity focuses on progressivity of healthcare financing inclined to healthcare payment as a proportion of one's income. Thus the

poor spends lower proportion of their income on healthcare compared to higher income earners in society. Horizontal equity ensures that financial protection does not lead to discrimination against a segment of individuals who contribute to a fund. Thus all individuals must be made to contribute proportionally within their income brackets. Horizontal equity also extends to imply that people within higher income brackets are not overly burdened with higher contribution to a fund.

Financial Sustainability of UHIC

The implementation, sustenance and success of new policies that are launched are predicated on or tied to the review of similar studies or policies implemented elsewhere. Reviewing similar policies both local and international paves the way to shortening the roadmap to success, and may prevent stagnation or failures of such policies (Pannarunothai, Patmasiriwat, and Srithamrongsawat, 2004). Implementing health insurance policies in developing countries should therefore be preceded by reviewing similar policies elsewhere. Policymakers must thus make it a point to review similar policies if growth and sustenance of their own policy which will benefit citizens is what they intend to achieve. Reviewing similar policies will bring to the fore the obstacles their own policy is likely to encounter, and the necessary precautionary measures to put in place to overcome impediments as they occur.

The essence of health insurance is to make the financing of healthcare adequate and cover a wide range of citizens (Ibrahimipour et al., 2011). Adequacy and wide coverage are dependent on sustainability of health insurance policies. Ibrahimipour et al. further claims that sustainability is attained through long-term systematic planning, with particular reference to macroeconomic,

socioeconomic and political context of a country that implements insurance policy. Planning should completely affect all the factors so as to make insurance policy run effectively and efficiently and hence reduce the health disparities among citizens within a nation.

Information on insurance rates and other demographic variables should be readily available for effective and sustainable implementation of insurance policies (Atanasova et al., 2011). Lack of information will imply insurance rates will be unknown, and will invariably affect effective planning of a policy in the determination of a government's liability to fund unmet premiums, and the contribution to be made by the various social classifications of citizens. Regressive financing should be avoided as it impacts on sustainability negatively. Regressive financing method of fixed premiums causes lack of fairness and may demotivate the poor to pull out of health insurance programs. In place of regressive financing, progressive financing is encouraged, a tax based on the proportion of income, and government revenue to support the financing of healthcare should be embraced.

Provider payment methods by health insurance entities may and can hinder or stimulate provider and patient behavior thereby, limiting or generating enough funds to sustain a program. Provider satisfaction and health worker participation in the retention of premium payers are directly influenced by provider payment methods. It is a known fact that payment methods influence how far health workers urge citizens to join or stay in insurance programs. Health workers who are thus satisfied with the way payments are made are more likely to encourage patients to enroll in insurance programs thereby making such policies viable and sustainable. Payment methods may also affect population enrolment directly, through the level of patient

copayments for health; and indirectly through their impact on the quantity and quality of healthcare services provided by insurance enrollees (Robyn, Sauerborn, and Barnighausen, 2012).

Sustainability of insurance policies is also directly related to cost-containment. Cost-containment policies are attained through rationing of supply, wage modernization, price control and postponement of investment in long-term care (LTC) (Schut and van den Berg, 2010). The latter is achieved through the imposition of LTC insurance, which reduces the cost of healthcare services thereby making room for sustainability of regular health insurance programs. Income related copayments serve as means of cost-containment in making premium payers contribute toward their health needs; it has the potential of curtailing ex-post moral hazard. Copayments must be made progressive so as to keep the disadvantaged in society in programs (Sidorenko and Butler, 2007). A gatekeeper system and an independent body to provide examination for citizens who actually need certain health services may go a long way to reduce cost and enhance sustenance of insurance policies. Independent bodies provide more objective need assessment to determine whether an applicant needs services demanded. Where such services are not needed, the body will advise on such matter and prevent the unnecessary use of insurance funds (Bauhoff, Hotchkiss and Smith, 2011). Controlling cost from the supply side could also boost sustenance of insurance policies, postponement in investment and budgetary controls on certain expenditure not considered vital could stimulate long term sustenance of insurance programs in developing countries. Global budgeting if considered could be a viable stimulant to health

insurance sustainability. This entails the forecasting and consideration of all potential patients enrolled in a program before making funds available to providers.

Barnighausen and Sauerborn (2002), postulate that incremental development of insurance programs lead to success and sustenance of such policies. Drawing on the German model, the first of its kind in the world, they affirm that the incremental development of the German system consisted of first passing a law that moved from general principles to more concrete rules and regulations. Secondly, the character of the laws systematically changed from permissive to obligatory; and finally, the laws expanded from regional to superregional coverage. The procedure allowed for detailed rules for the provision of health insurance, including minimum benefit package and extension of coverage to affect the majority of German citizens.

Among other issues, three key factors are often responsible and threaten the financial sustainability of health insurance programs: fairly constant revenue base, rising enrollment of eligible participants and qualified dependents; and generous benefit packages. These factors put together threaten the early years' success achieved by most health insurance programs across the world and failure to address these important challenges often lead to failure of some programs to achieve intended objectives (Chankova, Atim, and Hatt, 2010).

The NHIP: Sampled Views of Actual State of Affairs

Various diverse opinions have been expressed about the actual state of affairs of the NHIP, with some holding the view that the program is achieving its set objectives as spelt out in the Act, while others are of the notion that the NHIP is nowhere near achieving its established

goals. Some of the contending views follow in this section to serve as basis for empirical scrutiny of the NHIP as it relates to equity of coverage and financial sustainability.

Among the positive [pro] state of affairs of the NHIP, a Ghanaian web publication states that, “A Nigerian health delegation is in Ghana to understudy the national health insurance policy.” This is a sign that the NHIP as a whole is doing well and impacting on the health needs of citizens despite the criticisms and challenges the program is currently encountering. The online publication further asserts that prior to the Nigerian delegation’s visit on June 11th, 2013; a similar one was paid by Ethiopia and Benin. This further confirms that the Ghanaian program might be equitable and attaining some of its set objectives, thus causing other African countries to look up to it so as to improve their own policies. The website publication further avers that Nigeria runs a national health insurance program but the delegation was in the country to learn about the achievement of the Ghanaian program so as to enrich the Nigerian program. The Nigerian delegation visit was at a time when the NHIP was experiencing an increase in membership, increase in utilization, and also piloting a new payment mechanism—capitation [global budgeting].

Amidst some challenges facing the NHIP, countries such as Ethiopia, Cameroon, Bangladesh and Benin have sent delegations to Ghana to learn and share experiences of the NHIP. The Beninios delegation led by its Chief Executive Officer of Benin’s Health Insurance Authority informed the press that they were in the country to examine the Ghanaian system so as to replicate same in their country. The minister stressed the fact that Ghana was a leading and a

good example in health insurance policy implementation as such their presence in the country to take a cue from its method (<http://edition.radioxyzonline.com/>, 2013).

However, despite the trust and relatively good ranking the Ghanaian program has received, some critics state that the NHIP has failed to achieve the very reason for which it was established. In other words, it fails to cover all eligible Ghanaians, so all Ghanaians could have access to healthcare services. For instance, Chankova, Atim and Hatt (2010), aver that while official data indicate that an estimated 40 percent of the population live below the Ghanaian poverty line, this demographic group accounts for 2.4 percent of membership of the program.

The Act provides that test for indigent be strict; one should be unemployed with no visible source of income, and homeless, and have no support from other citizens. Narrow definition suggests a majority of Ghanaians considered poor on face value will be ruled out of the program, thereby discriminating against a remarkable proportion of the population. Another important issue confronting the program according to Chankova, Atim and Hatt is denials of benefits associated with the policy as a result of delays in issuing membership identification cards to citizens after registering. Cards in principle are required to be available at the end of the waiting period, but delays beyond this period are frequent. Additional concern confronting Act 650 is about perception of the program by citizens. Registered members of the program are of the notion that services received from providers fall below standards compared to services offered to nonregistered members. There are also reports of negative provider attitudes and practices such as illegal fee collection and possible delay in attending to insured patients within reasonable time lapse.

Apoya and Marriott (2011) of Oxfam detailed that, “for Ghana to be held as a success story for health insurance in a low-income country and a model for other poor countries to replicate is misleading” (p. 8). This is a strong indication that, the success story of the NHIP is not without drawbacks. There is no gainsaying that, assert Apoya and Marriott, the introduction of the NHIP in 2003 was a progressive step directed at reducing the detrimental impact of user fees, the limitations and low coverage of Community Based Health Insurance (CBHI) and to build the public confidence in the government’s role in financing and achieving universal healthcare for all residents. According to Apoya and Marriot, the policy provides a comprehensive package of services for members of the program; and indications are that a significant number of Ghanaians are covered under the program. However, according to analysis of available data, membership of the tax funded NHIP could be as low as 18 percent, less than a third of the coverage suggested by the NHIA and the World Bank. It excludes as much as 80 percent of the population, thus the design is flawed and unfair; all citizens pay for NHIP, but only a few get to join and benefit from it. Significant proportion of citizens continued and resorted to out-of-pocket payments for their healthcare needs; or relied on unqualified drug peddlers and home treatment due to lack of personal funds (Apoya and Marriott, 2011).

Richard Anane, an opposition politician and a former minister in the Kufuor administration is dumbfounded by the current state of affairs of the NHIP. The mismanagement of an institution entrusted with the responsibility of managing the health needs of citizens. Politicization of the body by current government could be the cause of the issues challenging the otherwise important national policy. Anane’s comment is preceded by the withdrawal of services

by some healthcare providers over government's failure to pay arrears owed them. “The Christian Health Association of Ghana (CHAG) was the first to withdraw its services on Monday to NHIP cardholders even though government promised to pay its debt on Monday.” The withdrawal of services to cardholders and the supposition that the program is political indicates that, the future of the program remains questionable in terms of coverage and financial sustainability (Anane, 2011).

According to the Australian Red Cross Accord (2009), several socioeconomic factors might challenge the Ghana health insurance system, the most noticeable being that a majority of economically active citizens work in the informal sector. The informal sector cannot be thoroughly regulated thus, it becomes difficult for the government to track and reimburse the insurance system. For instance, employment in the private informal sector was about 80.4 percent of overall employment in 2008, and because of inadequate regulation for the sector, it becomes difficult to rope the workers in the sector into the program. Compounding the problem further is the fact that four out of every ten Ghanaians can be classified as poor, thus an estimated 8 million people living in Ghana are considered poor. Additionally, between 25 to 30 percent of the people who depend on the informal economy for their livelihood are poor, making them the second largest group of poor after subsistence farmers.

Amporfu (2013), on a more scholarly note, states that “equity of the premium is important in ensuring membership because residents may have to pay premium in order to register with the NHIP. If the premium imposes financial burden on existing or potential

members, membership could fall and hence impede the ability of the NHIP to achieve universal coverage” (p. 2).

In addition to both the contending views raised, it is common practice in health insurance policy implementation that some socioeconomic groups are likely to be marginalized against other groups. Despite the stride chalked by the NHIP, empirical evidence suggests that enrolment for eligible individuals in the informal sector including the poor is relatively low. The Act makes provision for the poor, but only a minute proportion of this segment benefits from the NHIP (Jehu-Appiah, et al., 2010; Sarpong et al., 2009). Cebula (2006), hypothesized that “the higher a family unit’s income as a measure of ability to pay for insurance, the greater the family’s propensity to enroll in health insurance” (p. 383). Equity in healthcare financing requires that accommodation be made for individual who cannot afford to enroll in health insurance programs, to be captured for the purpose of accessing healthcare services (Yu, Whyne and Sach, 2011). In the face of these differing views, it is important that the NHIP be investigated to establish whether it conforms to equity of coverage and financially sustainable—all eligible Ghanaians notwithstanding their socioeconomic background are captured for the program; and reimbursement to healthcare providers made within acceptable time limits.

Problem Statement

Act 650 of the NHIP among others states that all residents with the exception of members of the Armed Forces and the Ghana Police Service shall belong to a health insurance program registered under the Act. This presupposes that all residents of Ghana are required under the Act to be registered no matter their geographical location within the country, socioeconomic status,

sex/gender, educational status among others, so as to be able to access healthcare services in Ghana. However, per Apoya and Marriott (2011), and evidence gathered from the Ghanaian media suggest a rather contradictory picture of the NHIP. It is believed that after almost a decade of the launch of NHIP, about 18 percent of the Ghanaian population is registered to benefit from the policy, a situation that makes it inequitable, thus a significant proportion of the Ghanaian population, the majority of whom are considered poor and live in rural areas are left to personally handle their healthcare needs. It is also asserted in most Ghanaian media that the program has and continues to fail to provide financial sustainability to healthcare providers; thus negating the very reason for the establishment of the program: providing adequate funding for healthcare providers to carry on with the task of dispensing services to the citizens of Ghana. Anane (2013), an opposition politician recently stated that the mismanagement and politicization of a policy mandated with handling the health needs of citizens could be blamed for the issues confronting the NHIP.

NHIP was born as a result of discordant voices among politicians and civil society to the effect of cash-and-carry or out-of-pocket payment. The inability of Ghanaians to pay for their medical bills became a major issue of the presidential and parliamentary elections of 1992 and 2000. Parties advocated for a better way of financing healthcare services based on the outcry of citizens for government to intervene and mitigate the plight of most residents who could not afford to pay for cost associated with healthcare services, and therefore left to go home and die.

Civil society and organized labor joined politicians in advocating for acceptable methods of healthcare financing in the country, notably among them include the Ghana National

Association of Teachers, Judicial Service workers, Civil Servants Association, among others. These groups believed that being employees of government with meager salaries made them vulnerable to the cash-and-carry policy (Ofori-Birikorang, 2009). Despite its inception, it appears that the health delivery system is slipping back to the days of the cash-and-carry system. Health institutions are losing the confidence reposed in NHIP as a source of revenue because a lot more Ghanaians are either not registered by the program or refusing to register to contribute toward the policy. The failure of the policy as alleged by politicians, interest groups and citizens call for a thorough empirical investigation to determine the equity of coverage and financial sustainability of the program.

The first three years of the NHIP's operation saw an increase in the utilization of curative healthcare services, financial protection and a reduction in out-of-pocket payment for most citizens. High coverage ensured better access to healthcare services for most Ghanaians, but the program failed to attain equity in enrollment for all citizens. Thus, there is a need for a refocus and acceleration of coverage by NHIP to target poor Ghanaians so as achieve a higher coverage of the entire population (Chankova, Atim and Hatt, 2010).

Amporfu (2013) adds that the gini index of Ghana is .40, which makes income distribution highly inequitable. Compounding the inequality in income is the fact that data on the performance of the informal sector is barely in existence. The informal sector has a lot more of people perceived to be poor to be working in it, and therefore without data for this segment, it becomes difficult to determine how much it can contribute to the national program. Lack of data

could further aid in vertical and horizontal inequity of contribution of premium toward the program.

Research Questions

The Act establishing the NHIP stipulates that all eligible Ghanaians must sign up and register for a health insurance policy and contribute toward the program if not exempt as spelt in the Act. The subject matter of this study will hence focus on whether the Ghanaian health insurance policy is equitable for all citizens in terms of coverage and financially sustainable as outlined. The study will thus empirically examine the following research questions:

1. Is the Ghana National Health Insurance Policy equitable with respect to:
 - I. Gender
 - II. Marital Status
 - III. Health Status
 - IV. Income
 - V. Residence [Rural/urban]
2. Is the Ghana National Health Insurance Policy financially sustainable?

In addition to the research questions, perception [satisfaction] of the NHIP will be ascertained from participants of the study since it plays crucial role in sustaining health insurance financing.

Answering questions posed in this study will require immersion into the Ghanaian culture and finding out whether the program is achieving its mandated objective as stated in the Act. Immersion will involve administering questionnaire to eligible respondents and, interviewing

both administrators of healthcare providers and representatives from NHIA selected offices in Ghana.

Significance of Study

Review of available literature indicates that cost of healthcare continue to grow bigger and beyond the reach of governments of most developing countries especially countries within sub-Saharan Africa. This phenomenon has negatively impacted the health status of the majority of citizens living in this part of the world, particularly the poor and vulnerable. To overcome the trend, most governments of the region have resorted to health insurance programs as a means of improving the state of health of their citizens. Though many studies have delved into insurance policies in the developing world, little or no study have explored the possibility of whether health insurance policies in developing countries are equitable, and able to sustain themselves for the benefit of the growing populations of these nations. As a result of limitation, the study will delineate available literature and attempt a mixed method research approach to find out whether the Ghanaian health insurance policy is equitable and financially sustainable.

In attempting to reveal how equitable and financially sustainable the Ghanaian policy is, the study will add to the extant literature the following:

1. The study will guide policymakers in considering equity and sustainability of programs in the implementation and administration of important policies such as comprehensive health insurance policies.
2. The study will further serve as a guide to governments of developing countries as to how to go about amending policies that have already taken off to the benefit of citizens.

3. Serve as guide to the type of intervention to adopt in case of absence of equity in the program.
4. It will also add to the existing literature a shift in the approach to implementing comprehensive health insurance programs in developing countries, particularly countries in sub-Saharan Africa.
5. The study will similarly be the first of its kind by way of providing citizens of Ghana the opportunity to evaluate a policy that affects them.
6. Finally, the study will serve as a platform for future research in the implementation of comprehensive health insurance policies in developing countries.

In addition to understanding the importance of equity of coverage and financial sustainability of UHIC, the next chapter is devoted to discussing similar policies in both developed and developing nations. Thus chapter two will provide a brief overview of similar policies, and how they were implemented to attain their current status. Contribution to finance programs and how they have achieved financial sustainability will be highlighted.

Chapter II: Universal Health Insurance Programs in Selected Countries

The overarching intent of this chapter is to serve as a platform for a comparative analysis of the Ghanaian health insurance program. The chapter will sketch health insurance policies in some selected nations from the time of their inception and how the programs have evolved over the years to their current status. Management and planning of the various programs and how this has enhanced and guaranteed financial sustainability is noted in this chapter; and will be used for cross reference in chapter V. Thus the Ghanaian program will be juxtaposed with the features noted in this chapter after the statistical analysis in chapter IV.

Developed Countries

Germany

Germany was the first among developed nations to implement health insurance policy for its citizens (Adolino and Blake, 2011). The German health insurance program was based on and characterized by incremental changes and adjustments during its nascent and developed stages. Statutory sickness funds metamorphosed out of relief funds which had its origins within medieval guilds. Relief funds were categorized into journeymen, craftsmen, factory, trades people and community funds. Bismarck then transformed the German health system in 1883, the law establishing the reformed comprehensive social insurance was incremental rather than transformational. The policy built on experiences gained in the administration of regional relief funds, and secondly social change brought about by membership in the funds. The voluntary relief funds served as a learning platform for the development of skills and knowledge in insurance administration and actuarial science at the level of provision, and regulation at the

level of government. The Bismarck's system had already been tried and proven to work in its numerous regional predecessors within the medieval guilds. Support funds were largely self-governed; employers and employees were represented in the bodies of self-governance for the private sector. Compulsory insurance was already in existence in many municipalities (Barnighausen and Sauerborn, 2002).

Underpinning the German national health insurance policy are guiding principles which were solidarity, decentralization and non-state operations. A compromise of the last quarter of the 19th century resulted in the management of sickness funds by employers and employees. Sickness funds though managed nationally were also organized on regional basis (Altenstetter, 2003). The social health insurance systems are administered by several self-governing, quasi-public, and nonprofit health insurance funds. At the state and federal levels, the funds are organized into associations, and work together in functions such as rate setting or utilization reviews. Providers are corporately organized; particularly physicians who provide services to members of funds are members of their state. These state unions of physicians are responsible for negotiating budgets with insurance funds, and are also responsible for splitting up budgets among their members (Jost, 1998). Though regionalized, the central state of the German government retains several important functions within the national health insurance system. The national government acts as supervisor, enabler, and facilitator. The minister of health, among other functions, also asserts regulatory authority over nonprofit and self-governing sickness funds.

Japan

The national health insurance policy of Japan has a long history just as the German policy. It dates back to 1835 with the inception of the *Jyorei* which translated to “giving affordable compensation in a regular manner.” *Jyorei* was community based insurance with intent of harnessing contributions from members of mostly rural dwellers so as to warrant and maintain the continued presence of community based physicians in their villages. *Jyorei* became the precursor to the establishment of the National Citizen’s Health Insurance Fund (NCHIF) in 1938. The NCHIF became one of the guiding pillars of today’s Japanese social health insurance system (Ogawa, Hasegawa, Carrin and Kawabata, 2003).

Japan’s health insurance policy was built on the foundation of occupationally grounded government-mandated insurance plans, which begun in the industrial sector in 1922 and expanded gradually to cover most employee groups. By 1958, the government had established a National Health Insurance (NHI) to absorb citizens not covered by employee health plans (Adolino and Blake, 2011). Health insurance is mandatory for all Japanese, and the system is two-tier: employment based which covers employees and their dependents; and secondly the NHI based which is regionally organized and takes care of civil servants, public enterprise employees, and teachers among others. Workers of private enterprises and their dependents are insured by society managed health insurance or by government managed health insurance in the case of small enterprises (Nakatsuka et al., 1991; Kuriyama et al., 2004).

The Japanese healthcare policy gained universal health insurance status by 1961, with approximately 123 million Japanese covered. NHI has a wide coverage of medical treatment,

which includes diagnostic tests, medication, surgery, supplies and materials; and payment of physicians and other personnel among others. Patients are required to copay for all treatments and the NHI reimburses providers on the basis of fee-for-service; where the price of service is determined by a uniform national fee schedule (Kupor, Liu, Lee and Yoshikawa, 1995; Kuriyama et al., 2004). The Japanese government is responsible and interacts with sickness funds established by individual businesses and regional NHI units. The sickness funds are in constant contact with relevant healthcare provider organizations. Fee schedule is set in formal negotiations between a Central Social Insurance Medical Council and the Ministry of Health and Welfare. The formal arrangement of negotiation to set and fix prices, and payment of fee schedule is done to avoid arbitrary increases in fees by one party and failure to meet payment schedules by insurance organizations to providers (Adolino and Blake, 2011).

The United Kingdom

The first national health insurance policy in the United Kingdom was passed in 1911. The policy provided incomplete care to limited numbers of low-income citizens: covered workers and did not extend to their dependents. Coverage included primary care, pharmaceutical drugs, and cash benefits during sickness and disability. The main custodial of insurance during this era were provident societies, doctors' clubs, and fraternal organizations who offered varying voluntary insurance coverage. The trend gave way to healthcare being financed through out-of-pocket, charity or through public hospitals (Light, 2003; Adolino and Blake, 2011). Dissatisfaction with the program and a cry for reforms led to the creation of the National Health Service (NHS) shortly after World War II.

The NHS was established in 1948 as a replacement to the old fashioned policy that was limited in scope, coverage and inequitable and dependent on charity, municipalities and private provisions. NHS provided free universal service at the point of delivery and available on the basis of need to all citizens of the United Kingdom. The new policy embodied features such as meeting the needs of all citizens, free service at the point of delivery, and based on clinical need and not ability to pay. Implicit in the features of the new policy is its comprehensiveness in scope and coverage, and embracing all clinical conditions of citizens of the United Kingdom. The model for administering the new policy is two-prong: a system of district hospitals owned by the state, and providing secondary care; and network of general practitioners who provide primary care and serve as gatekeepers (Shapiro, 2010). To benefit from the policy, patients are required to enroll with general practitioners who serve as referrals to specialists. Going through general practitioners avoids waste and saves resources, by allowing patients to first seek services at this level before being referred to specialist when need be, where extensive and expensive services are offered.

The NHS plays a major role in policy formulation in the healthcare sector in the United Kingdom. Senior administrators of the program are responsible for the setting of fee schedules in consultation with the health minister, the Treasury, and relevant health provider associations. In addition to policy formulation, the service ensures that most public hospitals receive fixed global budgets making it possible for health facilities to function continuously and sustainably on sound financial footing. Global budgeting ensures that services provided by health facilities are continuous and uninterrupted for lack of funds (Adolino and Blake, 2011). Global budgets

financed through taxes enable the NHS to meet the features of the policy as outlined in the Act establishing it.

The almost seven decades of the British NHS is not without issues, the service has been afflicted with serious difficulties that often assumes the proportion of crisis, the most recent being the late 1980s, which gave rise to internal market reforms as a perceived solution. The crises were blamed on underfunding and excessive demand arising from demographic trends, technical change and rising public and provider expectations among others (Duncan, 1998). Syrett (2010), states that despite the United Kingdom having one of the best public funded health systems in the world, the NHS, some treatment have always been provided by the private sector. That is to say that the public health system in the United Kingdom is unable to deliver as expected. As a result of the unmet supply by the public health system, about eleven percent of the population holds some form of private insurance. Unmet supply by the public health system includes dissatisfaction with facilities in public hospitals, as against availability of private medical insurance as part of the package of employment benefits, and inability to tolerate delays in treatment in publicly-funded health sector among others.

France

The French National Health Insurance (NHI) transfigured from a 19th century tradition of mutual aid societies to post-World War II participation of partners such as trade unions and employer representatives; and increasingly controlled and supervised by the central government (Rodwin, 2003). The NHI is characterized by an ideal synthesis of solidarity, liberalism and pluralism, thus occupying a position between the state-run National Health Service in Great

Britain and the market based system in the United States. Solidarity is essential in the realization of sustained financing of healthcare providers and allied services; thereby tying taxation as a major proponent of sickness fund. Liberalism undergirds the principle of *la médecine liberale*, a supposition that patients have a free choice of physicians; and physicians have freedom to practice where they wish, and enjoy a greater measure of clinical autonomy. Pluralism is evidenced by mixed service providers of private and public hospitals (Rodwin, 2003 and 2006).

The NHI evolved incrementally in response to demands for extension of coverage. Initial coverage was limited to salaried workers in industry and commerce whose incomes were considered low. By 1945, NHI was expanded to include all industrial and commercial workers and their families irrespective of their income level. In 1961, farmers and agricultural workers were covered, and in 1966 independent professionals were included in the fold. By mid 1970s, NHI was declared universal by an act of parliament, and virtually covered all residents of France (Adolino and Blake, 2011).

Under NHI, three main insurance schemes provide reimbursement for health services. Salaried workers are associated with *Caisse Nationale d'Assurance Maladie des Travailleurs Salaries* (CNAMTS) which covers 84 percent of the legal residents of France. Farmers and agricultural workers are associated with *Mutualite Sociale Agricole* (MSA), which constitute five percent of the population; and independent professionals, taking care of by the *Caisse Nationale d'Assurance Maladie des Professions Independentes* (CANAM), which covers seven percent of the population of residents (Latry, Molimard, Begaud and Martin-Latry, 2010; Rodwin, 2003). The NHI covers services such as hospital care, outpatient services, and prescription drugs among

a host of others. Physicians in private practice are paid directly by patient on the basis of a national fee schedule, and patients reimbursed by their local insurance funds. Public hospitals are paid on the basis of annual global budgets negotiated every year between hospitals, regional agencies, and the Ministry of Health. Prices of prescription drugs allowable for reimbursement are set by a commission made of representatives of the Ministry of Health, Finance and Industry (Rodwin, 2003).

South Korea

The first Korean national health insurance policy was launched in 1963; the law provided that medical insurance should be made available to citizens on voluntary basis. Voluntarism made the policy virtually ineffective: covering an insignificant number of citizens thereby defeating the purpose of risk pooling (Son, 1998). By 1977, the medical insurance policy had undergone a radical change: a compulsory national health insurance (NHI) policy was launched, and gradually expanded to cover the entire population. Twelve years after the launch of NHI, the policy was fully operational covering the entire population of South Korea (Son, 1998; Yang, 1996).

The NHI policy was incremental in nature, it begun with mandated medical insurance for employees and their dependents in organizations with more than 500 employees. The policy gradually expanded to other sectors of the economy by 1979; government employees, private school teachers and industrial workplaces with more than 300 employees were required to enroll into the new regime. NHI was regionally based; covering all rural residents in 1988 and then extending to include urban dwellers in 1989 (Lee, 2003). Contribution to the NHI insurance

comes from three sources: premiums paid by citizens, government subsidies and out-of-pocket payments. Premiums paid by citizens are split between employees and employers (Han, 2010). Patients are allowed a choice of hospitals and clinics under NHI, providers are paid by fee-for-service in return for services provided and covered under the policy. Under NHI, payment is two-prong: NHI contribution and out-of-pocket payment by patients. NHI did not cover all provider services, the extent and level of insurance coverage are determined by the national government. Non-covered services are classified under new or expensive high-technology medical services (Yang, 1996).

The United States of America

On the 23rd of March 2010, President Obama signed into law the Patient Protection and Affordable Care Act (PPACA), and subsequently signed the final reconciliation bill on March 30th of the same year. This singular act of presidential assent made the law the most important social legislation since the enactment of Medicare and Medicaid in 1965 (Harrington, 2010). This legislation was precipitated by an aspect of America's healthcare system bedeviled with decreased life expectancy, restricted patient choices for healthcare, and poorer health outcomes, thus depriving most citizens of some inalienable rights. The legislation is thus largely considered as reforms applied to the insurance sector to expand coverage and improve access to healthcare for citizens (Lineaweaver and Brandon, 2012).

In 2008, there were an estimated 46.3 million uninsured Americans, about 15 percent of the American population, an additional 25 million underinsured. Racial and ethnic minorities suffer disproportionately in terms of their rate of being underinsured. An estimated 13 percent of

whites were uninsured in 2008, compared with about 32 percent of Hispanics/Latinos, 21 percent of African Americans, and 28 percent of Native Americans/Alaskan natives. Per the Congressional Budget Office, PPACA is expected to expand health insurance coverage to 32 million individuals by 2019 through a variety of measures and would increase the proportion of legal nonelderly residents with insurance coverage from 83 percent currently to 94 percent when the law takes full effect (Moy et al., 2011). Harrington (2010), quoting the Congressional Budget Office states that the coverage expansion provision of the law will result in 32 million fewer individuals being uninsured in 2019. Further, PPACA will mark the American government's commitment to the widespread adoption of patient centered approaches to coordinated models of care, and rational reimbursement (Dinan, Simmons, and Snyderman, 2010).

The rudiments of PPACA include: a mandate for individuals and businesses as a matter of law to sign up for an approved level of health insurance, or pay a penalty; a system of federal subsidies to completely or partially pay for the now required health insurance for about 34 million Americans who are currently uninsured, and subsidized through Medicaid (Manchikanti, 2011). The highlight of the policy embraces: to expand health insurance coverage by requiring individuals to obtain qualified health insurance, subsidizing cost of coverage for persons in low income brackets, requiring all employers other than smaller employers to offer health coverage to employees, and significantly expanding eligibility for Medicaid (Harrington, 2010).

Act 2010 in 2014 will begin to provide income-related premium assistance and cost-sharing provisions to increase healthcare access and provide financial protection for people with lower incomes. The provisions of the Act will reduce exposure to out-of-pocket expenses for

covered benefits. PPACA will vary cost-sharing standards as well as premium credits by poverty level in order to limit a person's risk of incurring high out-of-pocket expenses and to make healthcare more affordable (Schoen, Doty, Robertson and Collins, 2011).

PPACA further provides for the establishment of state-based health insurance exchanges for individual and small-group markets. States are also permitted to join compacts to establish multistate exchanges. Insurers participating in the exchanges and those offering coverage outside exchanges will be restricted to offering four coverage tiers, along with catastrophic plans for young adults. Health insurers will have to accept all applicants regardless of health status, without excluding coverage for preexisting conditions. Premium rates will be allowed to vary only by coverage tier, number of dependents, geographic region, age (within 3:1 ratio), and tobacco use (1.5:1 ratio) (Harrington, 2010; Moy et al., 2011).

The Act mandates the Department of Health and Human Services to by 2011 establish a new office, the Center for Medicare and Medicaid Innovation, to identify new, cost-effective models of healthcare delivery and reimbursement and institute research into large-scale demonstration projects to implement and evaluate them (Dinan, Simmons, and Snyderman, 2010).

Developing Countries

China

The 1980s witnessed a vigorous policy direction by the Chinese government: it undertook healthcare reforms driven by market forces. Under the direction of the central government, enterprises and local authorities undertook measures to reform the traditional healthcare system.

Employees were required to bear 10–20 percent of all medical cost up to a certain monetary limit. Copayment mechanism was intended to instill a sense of individual responsibility and to help tackle the moral hazard problem inherent in the old system in which a central command guaranteed basic healthcare protection for all its citizens (Wong, Tang and Lu, 2004).

In 1993, the Third Plenary Session of the Fourteenth Party Central Committee of the Chinese Communist Party decided on a system of healthcare financing that combined a socially pooled fund with personal medical accounts. The socially pooled fund and the personal medical accounts were made up of payments of insurance premiums by employment units and employees respectively. Employment units were required to contribute about six percent of total wages each month, while employees were to contribute about two percent of their monthly wages. Contribution rates were subject to adjustments giving the state of economic affairs and development. Principal and interest earned in the personal medical accounts belong to employees. If contribution in an employee's account is fully depleted, the employee will have to pay out of personal funds any medical costs that are below the threshold of the socially pooled fund. Threshold of the socially pooled fund, which is the minimum amount that activates payment out of a fund, is about 10 percent of the average local wages, and the ceiling which is the maximum amount that can be paid out from the fund is about four times the average annual local wages. The sophisticated payment mechanism was designed to change people's mindset in connection with healthcare responsibility—healthcare was no longer a collective responsibility vested in the organs of state (Wong, Tang and Lu, 2004).

A piece meal approach was adopted by the Chinese authorities in the implementation of the policy. In 1994, two medium-sized cities Zhenjiang and Jiujiang were chosen to adopt the new health insurance model on an experimental basis. In December 1998, the State Council promulgated a landmark decree; the establishment of basic health insurance system for urban staff and workers. In 1999, the different components of the traditional healthcare system were unified into a basic health insurance.

The underlying objective of the Chinese healthcare reform was to provide better quality medical services at relatively cheaper cost in order to satisfy the basic medical needs of the general populace. The main theme of the healthcare reform was basic in relation to medical needs, implying the level and mode of health insurance should match the country's level of productivity and the capacity of the various stakeholders at the receiving end. In other words, the health insurance covered basic costs, while the costs of non-basic expenses, such as expensive diagnostic treatment and medicines, have to be paid out-of-pocket (Wong, Tang and Lu, 2004). Though the Chinese government replicated the system to cover the entire nation, it suffered major setbacks as employers and many employees could not meet the requirement of the decree.

Taiwan

After more than two decades of spectacular economic growth, the Taiwanese government in 1995 established its universal National Health Insurance (NHI) program. To prepare policymakers for the bold step, Taiwan's planners had studied health insurance systems abroad. The program, which was eventually blessed by the legislature, has been described as “a car that has been domestically designed and produced, but with many components imported from over

ten other countries” (Cheng, 2003). Before the establishment of NHI, Taiwan had ten different public insurance schemes, each covering a particular subset of the population: Labor Insurance (1950), Government Employees Insurance (1958), Farmers Insurance (1985), Low-Income Household Insurance (1990), among others. Together the ten programs covered 59 percent of Taiwan's population of 21.4 million at the time, leaving out an estimated 41 percent of the population uninsured, the majority of whom were children under age fourteen and adults older than age sixty-five (Cheng, 2003).

The implementation of the NHI program in 1995 provided an opportunity for a natural experiment: to measure whether universal health insurance would improve health or reduce disparity—a twin outcome expected by the public. The system offered free choice of providers to consumers and free choice of practice methods for providers under a single governmental payer. The implementation of NHI encouraged ease of access to healthcare providers, as a consequence, the average person made about 14 visits to physicians in 2004, nearly four times the United States average. Office visits accounted for nearly two thirds of national health insurance expenditure, compared with one third in the United States. Office visits averaged four prescriptions per visit. Although Taiwan has had a culture of relying on physician visits and medications to get well, utilization increased substantially after the NHI was introduced, particularly for the elderly and poor persons (Wen, Tsai and Chung, 2008).

The NHI bill was presented to Parliament in 1993, and after eighteen months of intense parliamentary debate and lobbying, was passed in July 1994. Chaos and confusion accompanied the NHI's hasty inauguration, despite that, it received popular public support: the program's 39

percent public satisfaction rate at inception rose to 60 percent in six months and to 70 percent or higher thereafter. It then fell to 59.6 percent in late fall 2002, as the public registered its dissatisfaction over a 7 percent increase in the NHI's premium rate levied on household income (Cheng, 2003). The policy is financed on a pay-as-you-go basis with income-based premiums typical of social insurance systems. Individual families, employers, and government pay a share of premiums. In 2000, 32.15 percent of the NHI's total premium revenue came from employers, 38.08 percent from individuals, and 29.77 percent from government. The share of the premiums paid by the insured, employers, and by government varies greatly within the six categories of population subgroups. For employees of public or private enterprises, government pays 10 percent of the premium, the employer 60 percent, and the employee 30 percent. The non-poor self-employed pay 100 percent of their income-based premium, without any government subsidy. For military personnel and their dependents, and low-income unemployed people who are unable to pay the premium, the government subsidizes 100 percent of their premium. The premium collected by the NHI for an individual varies based on his or her number of dependents (for whom premiums are levied on a per capita basis), although dependents in excess of three are effectively insured gratis (Cheng, 2003; Lee et al., 2010). Taiwan's healthcare providers obtain their revenues from three sources; payments by the NHI, patient user fees and copayments, and proceeds from the sale of products and services not covered by the NHI. The NHI pays providers on a classic fee-for-service basis, at uniform, national fee schedules.

Vietnam

Vietnam embraced social health insurance in 1992 as part of the country's overall health sector reform. The program is run by the nation's social security agency, and two forms of the program are implemented by the agency: compulsory and voluntary health insurance policies. The compulsory program covers civil servants, employees of state and private enterprises, retirees and the poor and vulnerable citizens. The voluntary program is geared toward other citizens who are not captured under the compulsory program. By 2006, the two programs covered an estimated 34.5 million citizens, about 40 percent of the population; the compulsory program captured 25 million of the population, while the voluntary program covered 9.5 million citizens. Though the voluntary program is reserved for citizens who are not eligible for the compulsory program, the Social Security agency failed to establish a mechanism that could lure and encourage individual citizens who do not qualify for the compulsory program to register for the voluntary insurance. Rather a system was put in place for students and other organized groups such as farmers and women's groups, and setting aside other non-organized citizens unregistered for any form of health insurance (Nguyen and James, 2010). Aside the compulsory and voluntarily insurance policies, the Vietnamese government also instituted a third policy geared toward meeting the health needs of the poor and vulnerable citizens, the healthcare fund for the poor (HCFP). Children under the age of six are provided with free healthcare (Ekman, Liem, Duc, and Axelson, 2008).

Indonesia

The Constitution of Indonesia mandates that every citizen is required and has the right to social security; and also emphasize the role of the nation in leading this crusade—universal social security coverage. The social security system includes mandatory social health insurance program for all citizens, but this all important policy remains an illusion for most citizens (Cuevas and Parker, 2010).

The Indonesian mandatory health insurance model is classified under three different categories and associated with different segments of its population. The *Askes*, the oldest is mandatory for all civil servants, pensioners of civil service, and all eligible family members associated with these groups. Eligible dependent members include a spouse and first two children less than 21 years of age or 25 years if a child is a full time student. A mandatory contribution of two percent is deducted from each member's monthly salary; benefits of the *Askes* include comprehensive coverage at public healthcare providers, in which members are subjected to the same benefits considered medically necessary. The program covered approximately 13.8 million of Indonesia's population. The Social Security Act of 1992, stipulates that employers with ten or more employees, or paying a monthly payroll of more than 1 million rupiah (Indonesian currency), must enroll for *Jamsostek*, a social health insurance policy. The law makes provision for employers with better health insurance to opt out of *Jamsostek*. Premiums are set for three and six percent of monthly salary for singles and married employees respectively. Employees and up to three dependents under 21 years are covered under this program. By 1999, this policy covered only 2.7 million workers, less than five percent

eligible citizens. The third, *Asabri* covers members of the police service and the military and their respective dependents (Hidayat, Thabrany, Dong and Sauerborn, 2004; Cuevas and Parker, 2010). Approximately about 30 million or about 15 percent of the national population was perceived to have been covered by the health insurance policy. By 2004, as a result of poor coverage of the program, the Indonesian House of Representative overhauled the Social Security law: mandating several additional programs for citizens. The new law was supposed to augment the existing ones and facilitate equity and fairness in the provision of healthcare services to citizens. New programs included old-age pension, national health insurance, work injury insurance, and death benefits for survivors of deceased workers (Cuevas and Parker, 2010).

Chile

Chile's social insurance fund dates back to the 1920s, it was set up initially to provide pension to distinct groups of workers. By the close of the 1940s, the program was expanded to include preventive and curative medicine. The *Servicio Medica Nacional de Empleados* (SEREMENA) was created in 1942 to cover preventive medicine care for white-collar workers, and by 1968 curative medical care was added. In 1952, the *Servicio Nacional de Salud* (SNS) was created to take care of all blue-collar workers. Thus healthcare provision was stratified along blue and white collar provisions; blue-collar workers received care from SNS providers while white-collar workers could opt for direct provision from SEREMENA institutions, or from approved private providers. By the early 1980s, the Chilean government undertook reforms in health provision and financing. The aim was to expand and involve the private sector in the provision and financing of healthcare. Expansion included the option for blue-collar workers to

choose private healthcare providers, and at the same time decentralizing the SNS into 27 regional groups, and transforming its healthcare institutions into self-managed independent units. In addition, legislation passed provided for the operation of private insurance organizations to compete with public insurance programs giving white-collar workers the choice of choosing and opting out of the government mandated programs (Barrientos and Lloyd-Sherlock, 2000).

Chile's health insurance coverage was dominated by the public sector; insured workers were required to channel their seven percent mandatory contribution to either a publicly managed National Health Fund (FONASA) or one of the privately prepaid plans known as *Institutos de Salud Previsional* (ISAPRE). ISAPRE system was created in 1981 with the aim of giving more consumer choices through competitive health insurance systems by expanding private provision of health services. ISAPRE premiums vary by way of specific health coverage plan; copayments are required at point of service and vary from ten to 40 percent of cost of each service. Though expanded over the years, ISAPRE has limited a sizeable portion of Chilean citizens due to its serious market imperfection (Bertranou, 1999). ISAPRE further contain clauses that create exclusionary coverage for a few groups of citizens: long waiting period after enrolment before one is allowed to access services provided, and no coverage for preexisting conditions.

Colombia

Colombia undertook its health sector reform in 1993; it was aimed at addressing inequities in access to health services by establishing a segmented health insurance program geared toward solidarity financing. Solidarity financing enhanced crossed subsidy where high

income workers contributed a portion of their emolument to cater for the health needs of poor citizens. The reform expanded to include the entire family members of payers of premium through a payroll deductions, which hitherto was limited to the worker—contributive regime. Reform also sought to establish subsidized health insurance for poor citizens; the poor were identified through focalization and a classification process. A third form of health insurance, a continuation of an older order known as privileged regime or special regime, mostly guaranteed through union agreements or aimed at special groups such as the military, petroleum industry workers and school teachers among others, run alongside contributive regime and the subsidized regime (Ruiz, Amaya and Venegas, 2007). Private health insurance programs run alongside the former policies for citizens who needed additional coverage to expand their base of physicians and for better inpatient accommodation. The reforms introduced some benefit plans: the contributive plan catered for most outpatient and inpatient services, the plan also covered a comprehensive medication list. The plan has a copayment rate depending on one's income. The subsidized plan does not cover most intermediate level surgery, and bears features of the contributive plan. The special plans have different health packages, all possess contributive package coverage. All the plans have relatively lower copayments based on income of contributors.

Financing of healthcare system in Colombia emanates from several governmental taxes and individuals contribution through payroll deductions. Contributive plan attracts four percent of income of individuals; additionally, workers contribute one percent of their income toward the subsidized fund. The subsidized fund also attracts funding from the general budget of the

Colombian government. All funds are managed through equalization fund that caters for adverse selection (Ruiz, Amaya and Venegas, 2007). It is projected that by the close of 2006, about 86 percent of the population had been covered by health insurance, with another two percent covered by the military and other programs (Giedion et al., 2010).

Argentina

The Argentine health insurance policy had its roots in the latter end of the 19th century, several features of which was passed down through to the 1990s. The Argentine health sector comprised of three major sub-sectors; social insurance health organization known as *Obras Sociales*, private health insurance and providers; and public health systems. Social health insurance organizations provided mandated coverage to all formal non-self-employed workers and their dependents. *Obras Sociales* were varied numbers of separate insurance policies managed mostly by unions; funds were monopolistic in nature in that each was limited to a segment of the labor force, thereby restricting individual workers with choice of providers. Given the small nature of each social insurance sector due to fragmentation, healthcare service provision became impossible for insurance institutions; hence funds had to resort to contracting out to private clinics and hospitals. The combination of fragmented insurance programs and contracting out services to third parties without regulations gave rise to inefficiency in the provision of health insurance to citizens (Barrientos and Lloyd-Sherlock, 2000; Bertranou, 1999). Due to inefficiencies in the existing systems, provision of health insurance was liberalized. Private health insurance organizations emerged in the mid-1980s, and consisted of two forms: for-profit and not-for-profit. Liberalization of health insurance meant that the *Obras*

Sociales had to compete with the for-profit and not-for-profit, thereby raising the quality of healthcare services. The reform further mandated that workers and their families could be affiliated to more than one social health insurance group (Bertranou, 1999). These provided voluntary programs for the high income groups to supplement what they were obliged to take.

Rwanda

According to egalitarian principle of equity, a health system is equitable when medical care is distributed based on patients' need to achieve better health as judged by health professionals, and unrestricted by patients' income (Schneider and Hanson, 2006). It is based on this norm that the Rwanda government having considered the health needs of its citizens, taking into account the socio-economic status of citizens, implemented a universal health insurance policy by way of community based health insurance (CBHI) programs. The Rwandan policy took into consideration the fact that a universal health coverage and access to health insurance, with an important degree of prepayment is crucial for the improvement of financial protection for many of its citizens (Saksena et al., 2011). Secondly, the Rwanda model sought to safeguard access to care for citizens in need and to provide risk protection by lowering catastrophic out-of-pocket health spending (Lu et al., 2012).

The Rwandan health insurance policy is two-tier: coverage for the formal and informal sectors of the country. The formal sector coverage encases the public sector—the *Rwandaise D'assurance Maladie* (RAMA), coverage for government employees and their dependents. And the Military Medical Insurance (MMI) program is mandatory for all military personnel and their families. Together the two programs covered about 3.3 percent of the population of Rwanda.

Benefit package associated with coverage for the formal sector is considered superior to that of the informal sector (Saksena et al., 2011).

Prior to 1999, the majority of Rwandans had no health insurance; this segment of the population was made of rural dwellers and people who worked in the informal sector of the country. Citizens engaged in the formal sector were mandated to have health insurance coverage through RAMA and MMI. By 1999, the government of Rwanda undertook health sector reforms which included providing all of its citizens with health insurance coverage. Community based health insurance [mutual/micro health insurance] programs were gradually implemented to supplement the catastrophic out-of-pocket payment that hindered most citizens from acquiring medical services from providers (Lu et al., 2012). Pilot programs were implemented in three selected districts in 1999 and 2000. The success of these programs led to expansion of the policy by other communities and local governments nationwide. Building on the experience of piloted projects, over hundred micro health insurance projects were created between 2000 and 2003. Population coverage increased alongside program expansion; an estimated 27 percent by 2004, and subsequently covering about 74 percent of the population by 2007 (Saksena et al., 2011). In 2008, a formal legal framework of mutual health insurance was fashioned out with the adoption of a law toward universal health coverage that made health insurance compulsory.

Mutual health insurance programs are based on community funding, it functions with an anticipated prepayment of healthcare costs and risk pooling. Membership to any of the programs dotted around the country is voluntary, and each member is required to make a contribution by way of annual premium payment. Members of mutual health plans are further required to pay ten

percent of their treatment cost as copay (Hong, Ayad and Ngabo, 2011). As a step toward avoiding waste and guaranteeing sustainability of the policy, enrollees of the informal sector are assigned to health centers. Referrals are made from health centers to hospital services covered under the informal sector. To mitigate adverse selection, enrollees must wait one month to utilize covered services. Members of mutual health insurance programs are entitled by law to a minimum service package at designated health centers, and additional complementary service package at district hospitals (Lu et al. 2012).

Funding for Rwanda's community based health insurance is diverse; fifty percent of funds comprise annual membership premiums. Other sources include transfers from other insurance funds, contributions from charitable organizations, support from development partners, and budgetary allocation through tax. Providers are paid through monthly capitation rates through fee-for-service basis, or via performance-based payments (Lu et al., 2012). Capitation payments impose the full insurance risk on providers and discourage them from oversupplying their services. Thus, it aids as incentive to produce efficiently by regulating treatment intensity within medically suitable quality dimensions (Schneider and Hanson, 2007).

Rwanda's community based health insurance policy had tremendous outcome. Health centers partnering with mutual health insurance programs reported higher rate of visitations and usage: up to three visits per member per year on the average. Higher visitation implies adverse selection is a risk with low enrollment and may lead to higher treatment cost for members of programs. Higher visitation rate for registered patients may not be adduced to frivolous service used or supply-side induced demand. It suggest policymakers are improving access to care, with

members of insured programs using care, based on their need and independent of their socio-economic backgrounds (Schneider and Hanson, 2007).

Rwanda's mutual health insurance policy is not without challenges. Makaka, Breen and Binagwaho (2012), reports that "while it has been relatively easy to cover Rwanda's formal sector, the government has risen to the challenge of extending coverage to those in the informal and rural economies. To move forward toward universal coverage, community based health insurance has been identified as an instrument to ensure financial protection and access to healthcare for the majority of the population. By exploiting concepts of community solidarity and participation, it has allowed the most vulnerable and poorest segments of the population to fully integrate into the health insurance system. Rapid expansion of coverage notwithstanding, and low subsidized premiums contribution of 1,000 Rwanda Francs (approximately \$1.67) per member per annum, led to financial unsustainability situation" (pp. 1-2). The challenges facing the Rwandan system can be summed up as, limited funds at both district and national pooling levels; weak pooling mechanisms; inadequate staff, limited management skills; abuse at different levels within the system, and large number of citizens in the informal sector with limited capacity to make contributions and difficulty in identifying members. These and other factors hinder the sustainability of the program.

To prevent failure of the programs and make them financially viable, the government of Rwanda undertook reforms aimed at making healthcare accessible to all of its citizens, especially the vulnerable segment of the population. Financial sustainability of the policy will lead to accessibility to healthcare for the entire citizenry, and protect the poor against financial risk

associated with ill-health. Reforms included bringing all stakeholders to outline measures to reduce financial risk associated with mutual health insurance. Stakeholders included representatives from the ministry of health, community based health insurance extended team members, Rwanda's development partners, and representatives from the 30 local districts authorities. To reduce debt of mutual health insurance, the ministry of finance carried out an audit of the financial position of each district, and paying all outstanding debt from tax revenues. Training of staff to man various programs was outlined in the reforms. Historical data and evidenced based policy processes featured much in the reforms. In 2008, the ministry of finance undertook a study to determine the per capita annual cost of services by providers. Based on the outcome of study, Rwanda franc 2900 was arrived at as a baseline for a new premium package for members of district based mutual health insurance programs (Makaka, Breen and Binagwaho, 2012).

Chapter Summary

A critical study of the literature provides that incremental rather than transformational implementation of UHIC across countries of the world, especially the developed world guarantees equity of coverage and financial sustainability of such programs (Adolino and Blake, 2010). Health insurance programs in advanced countries evolved out of minor policies managed individually. The metamorphosis of current insurance programs in the developed world out of smaller based health insurance systems paved the way for a better management and control of modern day national programs. For instance, Germany being the first in developed nations to advance health insurance policy for its citizens gained a lot of experience from existing but

smaller policies that had roots in medieval times (Adolino and Blake, 2010; Barnighausen and Sauerborn, 2002). Aside better and improved management of health insurance plans when initiated incrementally, slower expansion of programs allow implementers the opportunity to critically study each socio-economic subgroup thereby leading to customization to suit all groups. Incremental expansion of coverage paved the way for equity of coverage and financial sustainability of health insurance programs, because, implementers gradually put in place plans to take care of errors. Steady implementation permits judicious changes to be applied to policy to meet the needs of groups and expanding populations. The French NHI evolved incrementally as a result of demand for extension of coverage by citizens. Coverage was initially limited to salaried workers in industry and commerce with low income, and by 1945, the program had expanded to cover all workers and their families irrespective of the income status of individuals in these two sectors. The program by 1961 had expanded to cover farmers and agricultural workers, and in 1966 independent professionals were wrapped into the fold. By the mid-1970s, NHI was declared universal—all French residents were covered. The steady implementation method espoused by French policymakers paved the way for all citizens notwithstanding their socio-economic circumstances to be covered. The technique also paved the way for sustainable management of the French program (Adolino and Blake, 2010).

PPACA provides a lesson in health insurance coverage in advanced economies. To guarantee equitable health outcome for all residents irrespective of income levels, the Act was passed in 2010 to take care of a health system bedeviled with decreased life expectancy, restricted patient choices for healthcare, and poorer health outcomes. Pre-PPACA offered a

health system that made it difficult for 15 percent of the population that were uninsured, and a further 25 percent that were underinsured to adequately access healthcare providers. PPACA will make it possible for all citizens irrespective of income status to access the different kinds of healthcare provider services without any difficulties. The program will expand to cover about 32 million additional Americans by 2019, an increase from 83 percent currently to 94 percent when the law becomes fully operational. Further, the mandate clause enshrined in the Act implies individuals and employers have no option but to sign up for the program in order to make it financially sustainable (Lineaweaver and Brandon, 2012).

The Korean arrangement presents a different picture when health insurance program is not mandatory but voluntary. Voluntarism breeds ineffectiveness by giving in to insignificant number of persons signing up for the program, and thus defeats the purpose of pooling. Voluntarism of coverage led to adverse selection, and promoted inadequate financing of health insurance, and eventually steered the collapse of the program. Failure of voluntary coverage, called for the implementation of a compulsory program by the Korean authorities in 1977. Compulsory coverage was incremental in nature, and by 1979 expanded to include all sectors of the Korean socio-economic subgroups. Compulsory and incremental coverage gave the Korean authorities the ability to study lapses in the system, and thus were able to come up with solutions that strengthened the program, and eventually made it equitable and financially sustainable (Son, 1998; Yang, 1996; Lee, 2003). The Japanese model just as the German model had its roots in 1835 with the inception of Jyorei. Jyorei metamorphosed into NCHIF, and by 1958 the NHI was born to cover all other citizens who had no coverage. The Japanese system is unique and peculiar

for every region of the country: taking care of the special needs of every segment of the Japanese society. It provides for equity in meeting the health needs of every sector through regional groupings (Adolino and Blake, 2011; Ogawa, Hasegawa, Carrin and Kawabata, 2003).

Countries of the developing world adopted different approaches to implementing UHIC. The Taiwanese model stood out among policies implemented by these groups of countries. The government made conscious efforts to understudy similar policies of developed countries, thereby paving the way for carving out a model that was suitable for its situation—taking into consideration the socio-economic background of its citizens by classifying them into groups. The approach made it possible to implant equity of coverage into the policy, thereby guaranteeing equal access to healthcare services for all of its citizens. The Taiwanese model also assured the servicing of health providers by way of funding that was continuous and sustainable—the continuous servicing of healthcare providers is prerequisite for promoting good health outcomes for the nation. The broad-based nature of financing of Taiwan’s health insurance enhanced the promotion of sustained financing of healthcare providers (Cheng, 2003; Lee et al., 2010).

The Vietnamese approach to universal health insurance was rather precarious. It instituted compulsory and voluntary health insurance policies which were required to take care of various segments of the economy. The method gave in to discrimination against a section of the population, thereby rendering the model inequitable by way of coverage (Nguyen and James, 2010). Implementers of the policy failed to put mechanisms in place that could capture individuals who were not part of the formal sector. The Indonesian model despite being sanctioned by the national Constitution lacked qualities of fair coverage for all of its citizens.

The Rwanda approach after successfully covering the formal sector, served as platform for that country to carve out a different form of the policy to cover its informal sector, with issues encountered notwithstanding. The government instituted a model that roped people of the informal sector supported by funds from the national budget and external donors. The approach mandated and made it possible for providers to be resourced within reasonably time frames, which eventually guaranteed continuous provider services to rural folks across the nation.

Chapter III: Research Design and Methods

Introduction

This chapter focuses on establishing the guidelines for testing the validity of the concepts and theories adopted in the study. It further outlines acceptable approaches adopted to answer the research questions put forward. The chapter lays out the framework of the research design, data source, and questionnaire to be administered; and also provides a summary of the hypotheses of the study. The unit of analysis and sampling method considered for the study are also captured in this chapter. The variables for the study are similarly noted in this section.

Research Design

Establishing a road map to a study entails conjecturing a theory to form the basis of ascertaining an investigation. A theory of an enquiry is regarded as a formal statement or description of events expressed in a manner that lends support to investigation, verification and confirmation. Theories are dynamic and not static, and therefore can be subject to change and improvement; a good theory needs to cover a variety of situations and conditions to accommodate a wide area of issues impacting on a study (Black, 1999). After a careful scrutiny of UHIC in selected countries, and providing the principles underlying equity of coverage and financial sustainability, a theory will be outlined in the form of a model to pave the way for quantitative and qualitative analysis to uncover answers to the research questions put forward. The focus of the enquiry aims at revealing whether the NHIP is equitable in terms of coverage and financial sustainability. The structure of the research questions and hypotheses requires in-depth quantifiable empirical and qualitative approach in arriving at a veritable conclusion. The

approach assumed by policymakers to implement the Ghanaian policy, coupled with its intricate nature, necessitates a dual [quantitative and qualitative] approach in reaching a logical conclusion to the questions posed, since citizens and various interest groups give varying version of the state of affairs the national policy. While seeking to arrive at a logical conclusion by way of quantitative statistical analysis, the study will consider the fact that in social science research, the generality and parsimony of theories should take precedence over their accuracy (Przeworski and Tuene, 1970).

Research Theory and Hypotheses

In social science enquiries, research questions and hypotheses are established from theories that an investigator seeks to verify. Theories provide explanation to variables and hypotheses in a study. Historical precedence serves as capsules for theories for which scientific predictions or explanations are sought. A theory may be construed as “interrelated set of constructs or variables formed into propositions or hypotheses that specify relationships among variables” (Creswell, 2003, p. 120). A theory also specifies how and why variables are interrelated. Theories can be stated in series of hypotheses or in visual models.

Theories are derived from general statements that serve as explanations to a phenomenon, and usually more than one general statement is necessary to provide a complete explanation to issues. Statements have logical values, and must be interconnected; and none of their implication can contradict any other implications. Statements must also be empirically interpretable, and must also include a formal deductive framework such that the inferred consequence is not an intuitively obvious result of the premises (Przeworski and Tuene, 1970). At any stage in the

development of an inquiry, it is likely that more than one theory can be initiated to explain the same class of events, hence the need for postulation of additional goals that provide criteria for the evaluation of theories. Theories must therefore satisfy the following: accuracy, generality, parsimony and causality. These additional conditions minimize errors of prediction of social enquiries.

Generality of a theory refers to the range of social phenomena to which it is applicable, the greater the generality of a theory, the greater the range of phenomena that can be explained by the theory. Parsimony entails assigning smaller number of factors for explaining each social phenomenon despite the fact that histories of various events form the basis of a study. Each phenomenon is unique on its own terms, hence, it will not be appropriate to compare interpretation given to a findings derived from a particular phenomenon to similar situations because of uniqueness of social events. Causality of a system of variable is defined as dependent variables not being over determined, that is, no two variables within the system explains the same part of the variation of the dependent action, and secondly, causality also entails the system of variables being isolated—the explanation pattern does not alter with addition of new variables. Finally, theories must be accurate to explain completely as possible, and to also predict as much of the variations as possible. This is achieved in the amount of variance expressed and accounted for in the independent variables outlined in theories; the more the variance accounted for by a theory, the smaller the error of prediction (Przeworski and Tuene, 1970).

Studies are undertaking with the intent of deriving expected conclusions, such projected ends should not bias studies. These conclusions refer to hypotheses, and hypotheses are

statements of expected outcome which can be subsequently tested. Hypotheses represent expressions of relationships among variables, though not necessarily causal ones. Hypotheses as relationship expressed unambiguously, directs the focus of a study (Black, 1999). Hanke (2009) affirms that all social and political events take place in history, and hence a carefully constructed narrative serves as the right background for the erection of hypotheses of an ongoing enquiry of a study.

The hypotheses for this study will be two prong, equity of coverage and financial sustainability of the NHIP. The hypotheses will additionally take note of the principles put forward by Przeworski and Tuene (1970), Black (1999) and Hanke (2009). Similarly the hypotheses will encase factors underlying health insurance policies in some selected countries as gathered from the literature. Equity and financial sustainability as captured from the literature are also highlighted in the hypotheses.

Equity of Coverage of NHIP:

H₀₁: All eligible citizens will register for NHIP as specified and required by the Act

H₁: All eligible citizens will not register for NHIP

H₀₂: NHIP prevents discrimination based on health status of citizens

H₂: NHIP will discriminate based on health status

H₀₃: Impression and perception about the policy will be positive

H₃: Impression and perception about the policy will not be positive

H₀₄: NHIP coverage will be wide and reimbursement timely

H₄: NHIP coverage will be limited and reimbursements delayed

H₀₅: Premium paid will be proportional to income earned

H₅: Premiums paid will not proportional to income earned

H₀₆: NHIP will cover all eligible family members

H₆: NHIP will not cover all eligible family members

Financial Sustainability of NHIP:

H₀₁: Funds from the policy will adequately pay for services of providers.

H₁: Funds from the policy will not adequately pay for services of providers

H₀₂: Sources of revenue for financing healthcare providers will be broad

H₂: Sources of revenue will be limited

H₀₃: Adequate structures and regulations are put in place to cater for moral hazard and adverse selection.

H₃: Adequate structure and regulations are unavailable to control for moral hazards and adverse selection

H₀₄: Fixing of fee schedules involves all stakeholders.

H₄: Fixing of fee schedules is limited—does not involve all stake holders

H₀₅: Global budget provides sustainable financial base for healthcare providers.

H₅: Global budgets does not provide sustainable financial base for healthcare providers.

Research Model

With a little bit of substantive theory and some data, inference about causal relation can be easily made. Causal relations are obtained through models. Models are simplifications of, and approximation to, some aspect of the world. Models are neither literally true nor false though

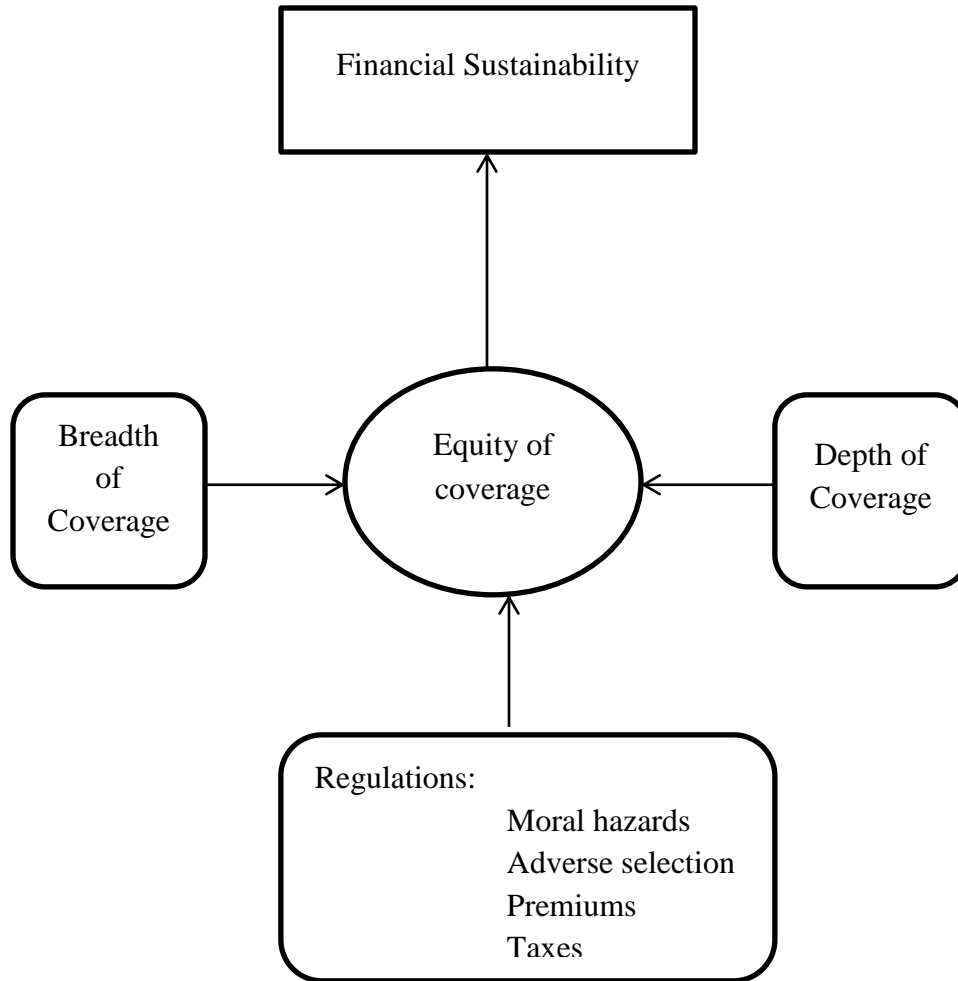
good models abstract only right features of the reality they present (King, Keohane and Verb, 1994). A model may also imply, relying on selected variables to draw a diagram that supports some theoretical notation of interest, and adopting data to estimate the parameters of linear equations corresponding to the diagram of interest (Sobel, 1995). Causation is understood by linkage to explanations. Aristotle stipulates that material and formal causes connect objects or events to their concomitant properties by providing a linkage that is viewed as having no causal relations in the present. Thus material and formal causes are engendered to answer questions why by statements of the form because.

The conceptual framework of the study as depicted in Figure 1 provides a model and a road map to uncover the degree of equity of coverage and financial sustainability of the Ghanaian health insurance policy. The objective of health insurance is to achieve universal health protection coverage. Coverage refers to health protection extended to individuals so that they can obtain healthcare services that are financed through a social risk-pooling mechanism, in a way that prevents extremely high out-of-pocket cost as posing as barrier to access or restrict poor patients to services of limited quality (Scheil-Adlung, 2013). To be effective, universal coverage needs to safeguard access to care for every resident in a country. This does not preclude national health policies from focusing, at least temporarily, on priority groups such as women or the poor when setting or extending social health protection. Universal coverage incorporates two complementary dimensions in addition to financial risk protection, the extent of population coverage [who is covered] and extent of health service coverage—what is covered. Households are considered to suffer financial catastrophe if they spend more than 40 percent of their disposal

income on premiums, the income remaining after meeting basic food expenditure on health services (Carrin, Mathauer, Xu and Evans, 2013). In addition to attaining universal coverage status by widening the breadth and depth of coverage, financial sustainability is paramount of all social services including health insurance. Financial sustainability must be backed by regulations to safeguard the vulnerable [adverse selection] and protect potential abuse of the system [moral hazards]. Sustainable health financing is concomitant to:

1. Revenue generation—financial contribution should be collected in sufficient quantities, equitably and efficiently;
2. Pooling of contributions so that costs of accessing health services are shared and not met only by individuals at the time they fall ill, thus guaranteeing financial accessibility;
3. Purchasing and or provision, with contribution being used to purchase or to provide appropriate and effective health interventions in the most efficient and equitable way.

Figure 1: Conceptual Framework of the NHIP



Research Methodology

This study avails itself to both quantitative and qualitative data analysis. To achieve the objective of study, a multifaceted approach is adopted to gather data; a survey is conducted by administering questionnaire to potential respondents, in-depth or intensive interview on selected administrators of healthcare providers and NHIA management; and data from secondary sources

to ascertain the levels of funds available to implementers of the program, and how frequent disbursements are made to healthcare providers.

Unit of Analysis

The unit of analysis is Ghana subdivided into the ten administrative regions, and further split into administrative districts. The unit of observation is data collected from eligible registered members and nonmembers of the NHIP, including their qualified dependents. Data collection will also cover administrators of the program and healthcare providers who indirectly benefit from the program by way of reimbursements. These data are then manipulated at the national level to determine outcome of findings for the groups. In safeguarding accuracy for the study, the researcher looked out for group level data that might lead to ecological fallacy—an error in reasoning where incorrect conclusion about individual-level processes are drawn from group-level data. Reductionist fallacy, incorrect conclusion about group-level processes drawn from individual-level data is also guided against (Schutt, 2009).

Data Collection

Data collection procedure is three-prong; survey, qualitative interview and secondary data. A questionnaire is developed to capture data for both equity of coverage and financial sustainability of NHIP from potential respondents by way of survey. Additionally, intensive interview is relied upon to extract data on financial sustainability of the policy from administrators of NHIP programs and healthcare providers. Intensive or in-depth interview is considered for this study because, as an approach to gathering data from prospective respondents, it has the potential of providing the researcher with a firsthand experience of

respondents' perception and attitude toward the concept of health insurance as a tool to ameliorate the health needs of citizens. Intensive interview further provides for consistency and thoroughness in the structuring of questions, as such gives respondents the ability to answer such questions consistently and precisely to meet the needs of a research (Schutt, 2009).

Secondary data are sourced from the NHIA 2010 Annual Report and the 2010-2014 Strategic Plan. Secondary data analysis involves the use of established data to answer a different research question than the original intent for which the data were collected. It is possible to reanalyze data initially collected for a different purpose with qualitative method—secondary data can be subjected to content analysis to determine an outcome of a study (Schutt, 2009). Secondary data collection is very important in terms of cost and time economies. Cost and time are reduced to the barest minimum compared to gathering primary data. Despite advantages, secondary data are not without problems, the first of which is how to manipulate data to fit the situation a researcher may be seeking to resolve. Secondly, the accuracy of secondary data may be questionable as it relates to the topic under study—numerous sources of errors possibly in the collection, analysis and presentations of the facts may eventually manifest in a study under review (Churchill, 1995).

The study implements a survey because of advantages associated with soliciting for firsthand information from respondents. Implementing surveys are also efficient and systematic methods of collecting data from a broad spectrum of individuals in social settings. Using survey to capture data for the study makes room to fine tune issues at stake for consideration, and thus avoids time wasted to find out methods used in gathering secondary data. Survey further allows

for description, comparison and explanation of social issues; descriptive use of survey allows for information obtained to be used to describe certain attributes of the population of interest. Another quality of survey is the use of information gathered to explain relationships among variables. Comparisons are made possible through descriptive information obtained through survey of two or more groups (Jones, 1996).

Questionnaire

The context created by a questionnaire has major impact on how individual questions are interpreted and answered, hence maximum care and diligence is taken into account in carving out the interview schedule (Schutt, 2009). Questionnaire is carved out based on similar studies by Kirigia et al. (2005) in South Africa and Jehu-Appiah et al. (2011) in Ghana. This is to ensure that the study is consistent with similar studies undertaken within the jurisdiction of health policy. The questionnaire also takes into account the issue of social determinants of health, which encompasses equity in healthcare administration. The determinants include differences between the socio-economic subgroups in Ghana. These groups include the poor and well-to-do; employed and unemployed; healthy and unhealthy; and people living in main cities and outside main cities among others (Perlman, Balabanova and McKee, 2009).

Appendix I provides an elaborate questionnaire aimed at soliciting the best possible responses to facilitate answering the questions posed in this study. Questionnaire is designed in accordance with David H. Folz's book entitled *Survey Research for Public Administration*. The individual questionnaire is preceded by one set forth by Jehu-Appiah et al. (2011); and is divided into three distinct sections: demography, the national insurance policy; and health status of

individuals' and perception on healthcare provision. Demographic information of respondents will facilitate assessing equity of the program. Knowledge and understanding of the policy is captured in the survey instrument to facilitate the revelation of whether citizens understand the essence of the policy, and why they have opted to register or not register to benefit from the policy. The instrument captures depth of coverage as it relates to services offered and received by members of the program. Health status of eligible individuals is posed to ascertain how it affects signing up and benefiting from the program. Health status may also facilitate the determination of adverse selection and moral hazards as the two important variables affects equity of coverage and financial sustainability of the program (Carrin, Mathauer, Xu and Evans, 2013). Operational procedure of the program and its corresponding impact on healthcare delivery and health outcome is posed to establish financial sustainability of the program. Furthermore, a question is inquired on how respondents perceive the program as a whole, and what they would wish changed or maintained to improve the program's core values and objective.

Appendix II and III are summaries of questions posed to NHIP administrators and health provider managers. Questions include whether NHIP enhances the financial strength of providers, and also serve as incentive for providers to continually provide services to clients. Time of reimbursement/payments will facilitate ascertaining whether payments are made within reasonable and acceptable time limits from NHIP offices.

All questionnaires are submitted to the Auburn University Institutional Review Board for ethical clearance. This is followed by a pilot test on selected Ghanaian communities before a final take off of the data collection process. Data were collected in November 2013 in the

selected regions of Ghana as highlighted in figure 2. Respondents were given the opportunity to read and sign consent forms before questionnaires were administered.

Sampling

In a quantitative analysis, recording the data generation process requires that the method used in demarcating the sample is made known (King, Keohane and Verba, 1994). The sample for study is based on probability sampling—each unit in the population has a known chance of being selected, and a representative sample of eligible citizens and their eligible dependents are more likely when this method is employed compared to other methods. Probability sampling will additionally lead to minimum sampling error—difference between the sample and the population from which it is selected (Bryman, 2001).

Ghana is divided into ten administrative regions; the regions are further divided into administrative zones known as districts. Citizens live in urban or rural areas with varying socio-economic conditions in the regions and districts. Population density in Ghana varies as one move from one area to the other. Considering that Ghana is divided into subunits, multi-stage cluster sampling is deployed as the first phase of the data collection procedure—regions are selected based on this method. This approach is suited for this study because of its ability to minimize cost and ability to make effective use of limited time as the population of Ghana is widely dispersed. The second phase of the data collection process is based on stratified random sample—dividing each region into units of districts, cities and villages and applying the questionnaire to groups selected (Bryman, 2001). The sample size is 600 eligible citizens inclusive of qualified family members. This number stands the potential of reducing sampling

error to the minimum. Figure 2 provides a pictorial overview of regions and areas from which data are collected.

Figure 2: Map of Ghana Indicating Points of Data Collection



Source: http://www.nationsonline.org/oneworld/map/ghana_map.htm 01/23/14

Interview Design

Validity and reliability is the hallmark of this study—guarantees accuracy of analysis. King, Keohane and Verba (1994), proclaim that applying the same procedure in the same way in gathering needed information will provide the same measure of results. Thus the study applied the same method of interview to all selected healthcare administrators.

Validity and Reliability

A survey is considered valid if it is devoid of errors and reliable if it is consistent and produces the same result every time (Schutt, 2009). Since human phenomena are intricate, this study will take into consideration validity and reliability as a concern in gathering the data for analysis. Validity refers to the extent to which measures correspond to concepts they are intended to measure or reflect. That is, to measure what is supposed to be measured and no other variable should obscure the findings of the study (Welch and Comer, 1983). To be valid and warrant accuracy, measures must be appropriate and complete. Appropriateness demands that a social measure must encompass a wide spectrum of variables to safeguard arrival at a definitive conclusion about the issue at stake. For instance, it is important that the various levels of income are considered when measuring income as a determinant of equity. To be complete the various factors affecting social issues must be looked at to guarantee attainment of a valid conclusion. In this study, for the purpose of illustration; the various demography of the sampled population is taken into consideration to determine equity of coverage and hence guaranteeing validity of the

study (Manheim, Rich, Willnat, and Brians, 2006). A survey is reliable if the measurement procedure consistently produces the same results every time when the phenomenon is not changing; it is the prerequisite for measurement validity (Schutt, 2009).

To guarantee estimates of validity and reliability of the survey and study, the following errors will be noted:

- i. Measurement error: questions will be made clear and concise to prevent respondents resorting to satisficing theory
- ii. Nonresponse: survey is designed to maximize social reward of participation as against social cost
- iii. Inadequate coverage of population: a fair sampling frame will be adopted to warrant a valid conclusion for the study
- iv. Sampling error: respondent will be randomly selected from the target population (Schutt, 2009)

Equity of Coverage

The operational definition of equity of coverage will encompass stipulations outlined in the literature and the Act establishing the NHIP. Equity of coverage is construed but not limited to the following:

1. The NHIP will cover all Ghanaians as enshrined in the Act
2. Breadth and depth of coverage will be wide
3. Premiums paid will be progressive rather than regressive
4. The policy will not discriminate based on demography of citizens

5. NHIP will not differentiate based on preexisting health condition
6. Perception about the policy by citizens should be positive
7. The policy should be capable of fulfilling its intended purpose—reimburse providers within acceptable time limits

Dependent Variable

From the definition above, and for the purpose of measuring equity of coverage (Y), the dependent variable will be registered and nonregistered members of NHIP, a dichotomous response. The value Y will be synonymous with equity of coverage (registered and non-registered members), is captured in the questionnaire administered to eligible respondents.

Independent Variables

The predictor variables (X) for the study which are captured in the questionnaire include, demography of respondents, health status, proportion of income paid as premium, depth of coverage and impression about the policy among others.

Financial Sustainability

The operational definition of financial sustainability for the purpose of this study is the ability of the implementing agency to raise the needed revenues to meet its assigned task as specified in the Act. Sustainability requires that the sources of funding be broad to necessitate adequate flow of financial resources to the program and eventually to providers of services. It also entails the willingness of the implementing agency to continually make funds available to healthcare providers upon delivery of services to clients. That is, reimbursement to healthcare

providers should be made within acceptable and reasonable time frame upon execution of services to clients.

Dependent Variable

The dependent variable for financial sustainability of the program [Y] will be how resourced and resourceful the NHIP is and will be in the years ahead. Therefore, the study designates the NHIP [Y] as the dependent variable for the study.

Independent Variables

The predictor variables for financial sustainability includes, the sources of funds of the program, regulations put in place to prevent waste, breath of coverage and frequency of reimbursements.

Survey Summary

The primary data were extracted from four different regions of Ghana as depicted by figure 2 above—Upper East, Bono Ahafo, Ashanti and Greater Accra regions. The areas highlighted on the map indicates locations in the regions for which the data were mined, these areas include Navrongo in the Kassena Nankani district of the Upper East; Sunyani in the Sunyani district of the Bono Ahafo; Ashanti Mampong in the Manpong district of the Ashanti and Accra in the Accra Metropolitan district of the Greater Accra regions.

In total, 600 questionnaires were distributed to potential respondents in the following arrangements, Greater Accra region 200, Ashanti region 155, Bono Ahafo 130 and Upper East region 115. The corresponding populations of the regions are Greater Accra 4 million; Ashanti 4.7 million; Bono Ahafo 2.3 million and Upper East 1 million (2010 Population and Housing

Census). A total of 427 answered questionnaires were returned, out of which a total of 22 were rejected for inadequate response.

For the in-depth interview, a total of fifteen administrators of various healthcare facilities were interviewed as part of the qualitative study. Attempts to get representatives of NHIA to quiz for the study proved futile as they did not want to go on record as providing important vital information to an outsider that may eventually become “dangerous” to their organization. Secondary data, which are basically descriptions of the performance of the NHIA, are extracted to unveil the performance of the program as it relates to financial sustainability. A six year period trend analysis of total membership, revenue and sources, and types of expenditure are extracted from NHIA records and summarized for this study.

Quantitative analysis

A cross sectional analysis is deployed in answering the research question on equity of coverage and financial sustainability—it is a snapshot in time, a capsule of information about what respondents have to say within a time limit. Cross sectional study allows for the sampling of different cohorts at the same point in time to provide information about respective stages of an issue. This type of analysis is characterized by more subjects but fewer factors can be investigated (Grosf and Sardy, 1985). Cross sectional analysis further refers to data collected at one point in time to describe and explain a social problem at a time (Jones, 1996). Undertaking cross sectional analysis for a study comes with advantages and restrictions. The shortcomings include and involve information/responses gathered within a limited time frame. Due to the snapshot nature of information gathered in this type of study, its inference or generalization to a

moving phenomenon may be inappropriate. Following inadequacy of using cross sectional study to generalize a moving population, it also becomes difficult to use or allow the characteristics of the snapshot data to be used to impute a relationship that has developed over time. Cross sectional study thus allows for the description of population, and relationship among variables within a given or restricted time frame. Though limited in scope in terms of generalization to a population, it stands to reason that with strong theory and solid data analysis, cross sectional study could serve as a sound basis to answer critical questions relating to social issues.

A snapshot analysis provides diagnostic information about the current status of the NHIP program. To complement the weakness in cross sectional study and to make general statement about the population under review; logit analysis is used to ascertain the extent of coverage of the NHIP. Logistic regression allows for the prediction of discrete outcome from a set of variables that may be continuous, discrete, dichotomous, or a mix. The discrete outcome in this study is whether one is registered or not registered based on certain factors—the independent variables outlined in the study. In logistic regression, the predictor variables do not have to be normally distributed, linearly related or of equal variance with each group (Tabachnick and Fidell, 2007). Logistic regression underscores the probability of a particular outcome for each case, for instance, one is registered or not registered for health insurance as a result of one's income status. Logistic analysis is appropriate when the distribution of responses on the dependent variable is expected to be nonlinear with one or more of the independent variables. For illustration, the probability that one may register for health insurance may be dependent on a

fraction of factors including age, income, and health status among others, thus making the relationship between the independent variables and the dependent variable nonlinear.

Due to the nonlinearity of logistic regression, the outcome variable \hat{Y} is the probability of having an outcome based on a nonlinear function of the best linear combination of predictors with two outcomes (Tabachnick and Fidell, 2007):

$$\frac{\hat{Y}_i = e^u}{1 + e^u} \quad (1)$$

\hat{Y}_i is the probability of the i th case ($I = 1, \dots, n$), and u is the usual regression equation:

$$U = A + B_1X_1 + B_2X_2 + \dots + B_kX_k \quad (2)$$

“A” is a constant, “B” coefficient and “X” predictor for up to k predictors. The linear regression equation translates into logit or log of the odds:

$$\ln (\hat{Y} \div 1 - \hat{Y}) = A + \sum B_jX_{ij} \quad (3)$$

The likely issue to be encountered with this procedure is: in logistic regression analysis, just as other analysis, vast predictors are considered, and on the basis of single data set, eliminate those that are not statistically significant. The practice could be dangerous as may lead to isolation of variables that have tremendous impact on outcomes in the real world situation (Tabachnick and Fidell, 2007). This study will, therefore, note all variables that might turn out to be not statistically significant, but in the real world may impact on the response \hat{Y} in this study.

For citizens who are not enrolled into the NHIP as captured by questionnaires, it is important to ascertain the relationship between why they failed to register and the corresponding attributable predictor variables. In other words, a multiple regression analysis is deployed to

ascertain whether there exist any form of relationship between the Y and the X values. Multiple regression starts with the assumption about the form of relationships between Y and X's values—the different observations on Y are mutually independent, thus, each X variable's impact on Y is independent of the other (Bartholomew, 1981). In a linear multiple regression model, the dependent variable Y is assumed to be a function of a set of i independent variables $X_1, X_2, X_3, \dots, X_i$ in a population. Expressed in equation form, X_{ij} signifies the value of jth observation of predictor X_i . The regression model assumes that for each set of values for independent variables, there is a distribution of Y_j values that the mean of the distribution is on the surface represented by the equation

$$E(Y_j) = \alpha + \beta_1 X_{1j} + \beta_2 X_{2j} + \dots + \beta_i X_{ij}$$

$\alpha, \beta_1, \beta_2, \dots, \beta_i$ are coefficients and represent population parameters (Berry and Feldman, 1985). β_i is the partial slope coefficient, also interpreted as a change in $E(Y)$ attributable to a unit change in X_i , all other predictors held constant. α is a constant [intercept] where the regression line crosses the Y axis, or the value of Y when all predictors are equal to zero.

Qualitative Analysis

The major task of qualitative analysis is description, description leads to answering research questions under review. Description must be distinguished from interpretation as the latter comes at the end of investigations (Patton, 1990). Qualitative data analysis focuses on text rather than numbers as in quantitative studies. Texts analyzed in qualitative studies are usually transcripts from interviews or notes from participants' observation sessions. Texts may also refer to pictures, diagrams and other images that a researcher examines (Schutt, 2009). Additionally,

from an interpretative point of view, a researcher reconstructs “reality” by inferring from texts provided by subjects of a study. Qualitative data analysis is recursive and reflexive in nature; it begins with the origin of data collection and not at the tail end of the gathering process. Thus, analysts begin with notes and transcripts by jotting ideas and how they interconnect with one another, and may relate to other issues. This procedure continues through the project’s lifecycle. Qualitative studies as such text analysis unveils to researchers how participants think, feel or did in some situations or at a point in time in an interview. Texts also serve as a method of shielding behind numbers and getting a feel of the real world situation through recorded events.

The ultimate goal of qualitative data analysis is to make sense of data gathered. That is, reduce the volume of information collected, identify significant patterns and construct a framework of reporting what the data reveals. In hindsight, there are no straight jacket rules except to do the best with one’s full intellect to fairly present the data and communicate what the data reveals given the intent of a probe (Patton, 1990).

Qualitative data analysis allows for the capturing of settings and patterns of people who aid in the production of text for a study on their own terms, rather than predefined measures and hypotheses (Schutt, 2009). Thus, an analyst identifies categories, patterns and relationships in a data set through a discovery process, in some cases devoid of hypotheses. As part of the iterative process, it is important that analyst capture vital concepts that tend to flow in investigations. That is, conceptualization begins with observation that is separated and put together more meaningfully. Conceptualization provides for a detailed description of what was observed, and a sense of why it is important.

Data gathered from administrators of healthcare providers are subjected to cross-case analysis. Cross-case or cross-interview analysis implies grouping answers from different people or units to common questions or analyzing different perspective on common centralized issues (Patton, 1990). Cross-case analysis, with an interview guide approach, group answers from different people by topic from the guide, but the relevant data are not found in the same place in the guide.

Chapter IV: Descriptive Statistics

Descriptive statistics plays a prominent role in the validation of research findings; it does so by measurement, causal validity and generalizability. Thus descriptive statistics are used to describe the distribution of and relationships among variables (Schutt, 2009). Descriptive statistics are similarly used predominantly in achieving causal validity by describing associations among variables, and to control for, and take account of other variables.

Appendix IV is a summary of the descriptive statistics of the data captured through the questionnaire administered to individuals in the selected regions of Ghana.

Data Summary

The primary data are extracted from four different regions of Ghana as depicted in figure 2—Upper East, Bono Ahafo, Ashanti and Greater Accra regions. The locations highlighted on the map indicate areas in the regions where data were mined; the locations are Navrongo in the Kassena Nankani district of the Upper East; Sunyani in the Sunyani district of the Bono Ahafo; Ashanti Mampong in the Manpong district of the Ashanti and Accra in the Accra Metropolitan district of the Greater Accra regions.

In total 422 answered questionnaires were returned [received], out of which a total of 17 were rejected for inadequate responses. The breakdown of Appendix IV further provides for the demographic variables as they relate to registered and unregistered individuals captured for the study. The data summary also outlined type of coverage for persons registered, and whether their policies cover all services as captured in the Act. The summary also includes percentage of

income that pays for premium; perception of individuals as to whether the NHIP is and will be sustainable; and the general impression of the entire policy.

Data Analysis

A mixed method approach is applied in unearthing the answers to the research questions posed in this study. Quantitative cross sectional analysis and qualitative methods are applied to the data gathered for the study; both methods have varying but unique ways in answering questions pertaining to social phenomena.

To meaningfully interpret logit model [equity of coverage], it is expedient that a model fits the data it describes. In other words, the predictor variables included in the model must be able to explain the response variable considerably with the model intercept only (Liao, 1994). The model fit for this study [variables in equation] analyzed with SPSS 21 is 80.70 percent, p-value of .001 and a constant beta coefficient is 1.433. The 80.70 percent model of fit is an indicator that the predictor variables are more than proportionally able to explain the response variable. The .001 p-value for the model of fit is also an indication that the predictor variables are adequately able to account for the response variable, better than the model with its intercept only. The .001 p-value is a further indication that the null hypothesis that the NHIP is equitable can be rejected. The beta coefficient of 1.433 implies there is a positive relation for the model, the dependent variable Y and the X predictor variables move in the same direction. To guarantee reliability of variables in the questionnaire, cronbachs alpha which determines and measures the internal consistency of variables is computed for the study. The alpha of the scale is .536; a measure above average, hence making the variables reliable for the study.

Table 1: Binary Logistic Results (Dependent Variables: Registered/Unregistered)

| Explanatory variables | β Coefficient | Odds Ratio | P Value | 95% C. I. |
|-----------------------|---------------------|------------|---------|---------------|
| Gender | -1.741 | .175 | .194 | .013 – 2.419 |
| Age | .938 | 2.555 | .442 | .234 – 27.923 |
| Marital status | .320 | 1.377 | .854 | .056 – 33.869 |
| Education | .011 | 1.011 | .980 | .437 – 2.337 |
| Rural/Urban | .107 | 1.113 | .943 | .061 – 20.441 |
| Occupation | 1.171 | 3.227 | .127 | .716 – 14.544 |
| Income | 1.366 | 3.921 | .141 | .635 – 24.218 |
| Health Status | -.097 | .908 | .859 | .311 – 2.652 |
| Household | .503 | 1.653 | .578 | .281 – 9.708 |
| Premium: Income | -.114 | .892** | .001 | .834 - .955 |
| Services covered | -.041 | .960** | .005 | .933 - .988 |
| Constant | -.321 | | .944 | |

**P \leq .05

To determine the logit outcome of equity of coverage of NHIP, the descriptive statistics in Appendix IV with n = 405 is relied upon. The SPSS 21 analysis rejected most of the variables included in the computation for lack of fit. The multivariate logistics, precisely binary logistic regression (logit) determined the odds involves in registering for the NHIP in relation to the variables captured in Table 1.

Table 2 is a summary of multiple regression analysis of why eligible citizens fail to enroll for the NHIP program, despite the mandatory requirement of the Act. The coefficient of correlation (R) is .963, coefficient of determination (R^2) of .928 and Durbin Watson coefficient of 1.966. A high R indicates a high correlation between the dependent and predictor variables; and a high R^2 typifies change in Y accounted for by the independent variables acting together on the equation line (Schroeder, Sjoquist and Stephan, 1986). Low variance of inflation (VIF) for all the variables under review indicates they do not tap into one another therefore the absence of collinearity (Guajarati, 2003).

Table 2: Multiple Regression Analysis Results of Unregistered Members of the NHIP

| Predictors | β Coefficient | t | P Value | VIF |
|----------------------|---------------------|--------|---------|-------|
| Gender | .014 | 1.015 | .311 | 1.072 |
| Age | .009 | .566 | .572 | 1.457 |
| Marital Status | .019 | 1.193 | .234 | 1.425 |
| Education | .016 | .933 | .351 | 1.539 |
| House Total | .002 | .153 | .878 | 1.049 |
| Rural/Urban | .022 | 1.544 | .123 | 1.100 |
| Occupation | -.008 | -.416 | .677 | 1.820 |
| Income | -.034 | -1.699 | .090 | 2.150 |
| Health Status | -.020 | -1.397 | .163 | 1.116 |
| Household Registered | .005 | .394 | .694 | 1.046 |
| Relationship | -.041** | -2.887 | .004 | 1.106 |
| Covered (household) | .958** | 68.110 | .001 | 1.079 |
| Impression | .015 | 1.039 | .300 | 1.074 |

**P \leq .05

Table 3: Regression Analysis of whether the NHIP is financially Sustainable

Dependent Variable: Do you think the NHIP is sustainable?

| Predictor | R | R ² | Beta | t | P Value | VIF |
|-----------|------|----------------|--------|-------|---------|------|
| Reasons | .150 | .022 | .150** | 3.038 | .003 | 1.00 |

**p \leq .05

Table 3 is summary of regression analysis as to whether the NHIP is financially sustainable. R and R^2 of the analysis is .150 and .022 respectively, a Durbin Watson coefficient of 1.986. Though a weak correlation between the dependent and independent variables, there is correlation between reasons offered by enrollees and nonenrollees as to why the NHIP is partially sustainable [R = .150].

Summary of Quantitative Analyses

The β coefficient of the binary logit model, processes the impact of one-unit [a] change in the explanatory variable on the log odds of equity of coverage [registration status], holding other variables constant (Kirigia et al., 2005). The coefficient of income as a proportion of premium paid, and services covered are the only significant variables at 95 percent confidence level. To interpret the outcome of the predictor variables on the response variable, logged odds are utilized. The effect of odds are multiplicative rather than additive, but with straight forward interpretation. Logged odds indicate direction for a one-unit [a] change in the predictor variables as it relates to the outcome variable (Pampel, 2000). From Table 1, it can be observed that with every individual registered for the NHIP, the logged odds for gender is -1.741, implying the registration of women coded zero (0) in the analysis for the NHIP falls relatively to the enrollment of men. Similarly, for every individual who is registered for the NHIP, health status as a major determinant of enrollment declines by -.097; proportion of income that pays for premium also declines by -.114, and the services covered by NHIP further declines by -.041. On the other hand, for every person who registers for the NHIP, citizens in all age groups are equally affected by log odds of .938. The following are equally affected positively, that is, act as major

determinants in one deciding whether to enroll for the program. Marital status, log odds of .320; education, log odds of .011; rural/urban residence, log odds of .107; occupation, log odds of 1.171; income, log odds of 1.366; and total number in household, log odds of .503. Thus, all the predictor variables put together play important roles in the positive direction—each of the determinants affects the outcome variable Y of the NHIP. It is also worthwhile to note that the proportion of income paid as premium and services covered by NHIP are the only statistically significant X variables for this analysis. And thus, despite the significance of the two variables, the representations of all the variables [factors] will determine whether the policy aligns itself to equity of coverage as portrayed in Appendix IV.

Examining the descriptive statistics (Appendix IV) in details, it can be observed that, men relatively more than women are registered for NHIP. This is confirmed by the negative beta value for gender, p-value notwithstanding. Proportion of income paid as premium and services covered tend to decrease with every individual who enrolls into the program. With the other positive beta values as per Table 1, it can be observed that education and rural/urban residence all have marginal effects on the dependent variable (Y). Though rural/urban residence affects Y marginally, residents in urban centers are more likely [relatively] to sign up for the NHIP compared to rural dwellers. Similarly, about the same [a higher proportion] of married individuals, and individuals who are single/divorce/separate signed up for NHIP, compared to those who have not signed up for the program in these two groups.

Table 2 indicates that only two predictor variables are statistically significant of all the variables presented; “relationship with household member,” with a p-value of .004 and “covered

under household member” with a p-value of .001. It can be surmised from the table that for every citizen who does not register, the likelihood of a household member registering goes down by -.041 (coded, Yes = 1; No = 0). And for members who do not sign up for the program, but under the coverage of household member, there is always an upward adjustment [coefficient of determination] of .958. Gender .014, age .009, marital status .019, education .016, total in household .002 and type of residence .022; all have positive beta values but very marginal and statistically are not significant; but all play important roles as to why individuals fail to sign up for the program. Other factors such as occupation (-.008), income (-.034), and health status (-.020) also falls for every citizen who does not register, implying these factors do not influence or impact on why citizens’ fail to sign up for the program. Household member registration and impression of the program though with positive beta values are very marginal, hence induces little influence on citizens’ objection of the program.

The regression analysis as to whether the NHIP is or will be self-sustaining produced a coefficient of correlation (R) of .150, coefficient of determination (R^2) of .022 and a Durbin Watson coefficient of 1.986. Most predictor variables are excluded because they produced exceptionally high p-values. Table 3 depicts a summary of coefficients with “reason” being the predictor variable.

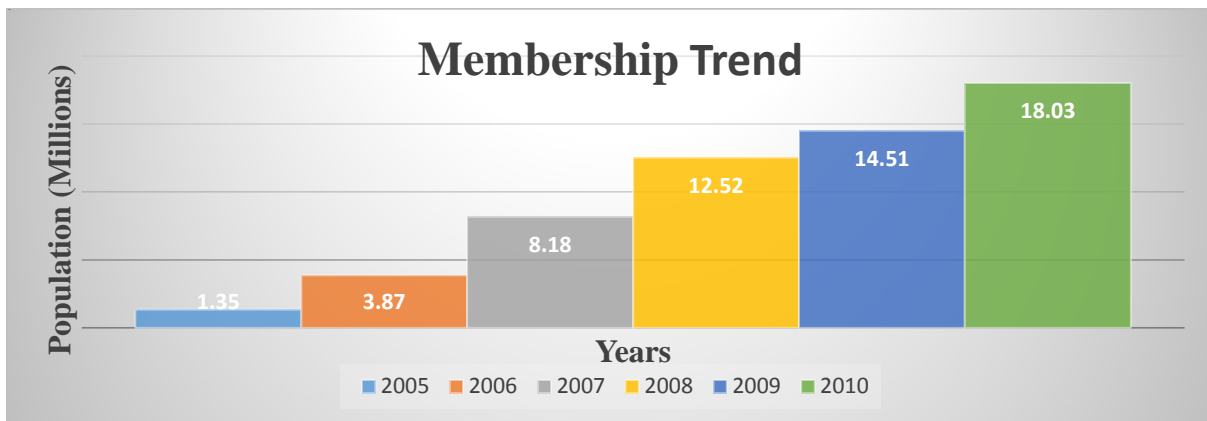
Qualitative Analysis: Financial Sustainability

This section deals with two main subjects, content analysis of questionnaire administered to administrators of healthcare providers and qualitative investigation of secondary documents of the implementing agency [NHIA]. The following provides a summary of data extracted from

secondary sources. Figures 2 (a, b, and c) provides a summary of the predictor variables in relation to the dependent variable—sustainability of the NHIP. For the secondary data, which are basically descriptions of the performance of the NHIP, a six year period trend analysis of total number of citizens’ enrolled countrywide; total claims payment; and sources of revenue and expenditure are extracted from the records of the implementing agency. Figure 2 further provides a pictorial overview of the trend analysis and revenue sources for the program.

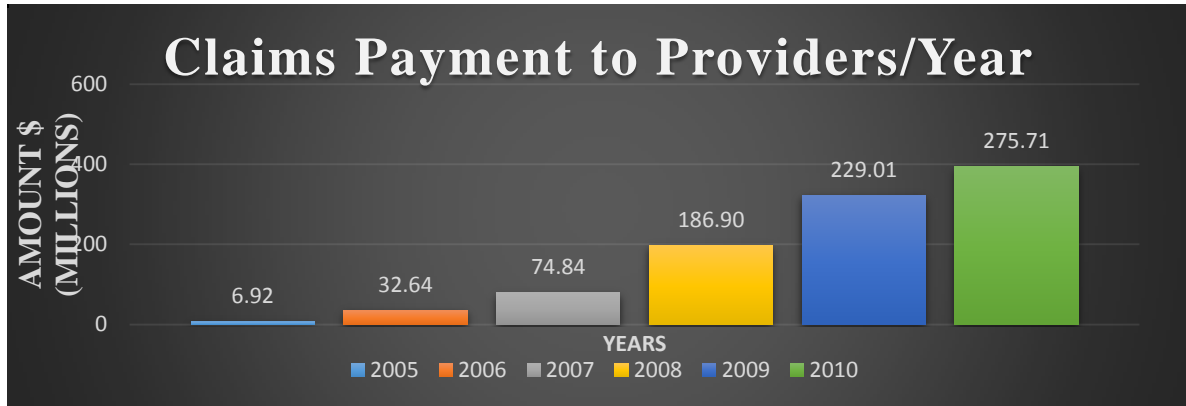
Secondary Data

Figure 2a: A Six Year Trend Analysis of the NHIP



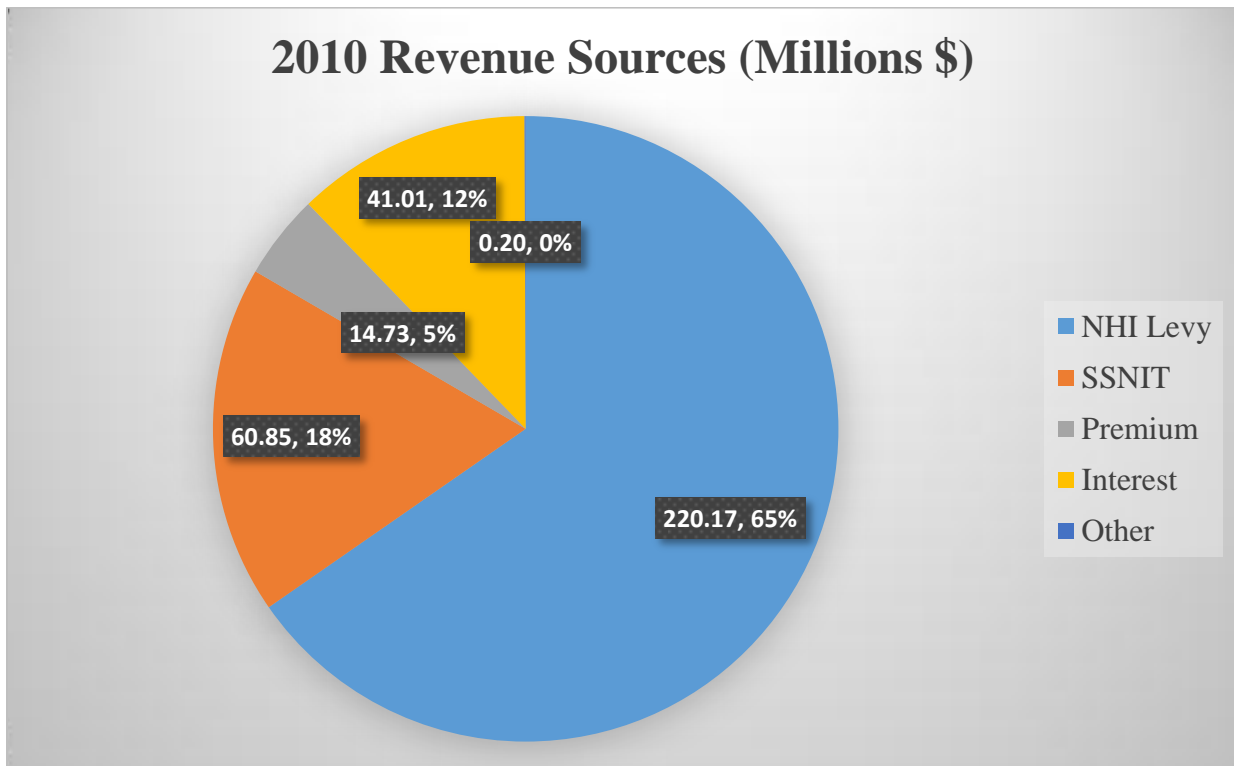
Source: NHIS Strategic Plan 2010 - 2014

Figure 2b



Source: NHIS Strategic Plan 2010 – 2014(Refer to Appendix V for cedi (C) equivalent)

Figure 2c



Source: NHIS Strategic Plan 2010 – 2014

Table 3 provides a summary of the income and expenditure statement of the NHIA for the financial period 2010. The revenue section of the statement signals that though various income sources are relied upon to finance the program, it is the NHI levy, which is the value added tax imposed on selected goods and services that brings in substantial revenue to the program. All the other sources of revenue contribute less than half the amount brought in by the NHI levy. The expenditure section indicates that more than half the total expenditure is toward claims payments, with the rest of the amount distributed among logistics, ministry of health support, operational expenditure, Information Communication Technology and property. There is a deficit of \$25.02 million for the financial year under review.

Table 4: 2010 Income/Expenditure (Millions \$)

| <u>Year</u> | <u>Amount</u> |
|----------------------|----------------|
| Income | |
| NHI Levy | 220.17 |
| SSNIT | 60.85 |
| Premium | 14.73 |
| Interest | 41.01 |
| Other | 0.20 |
| <hr/> | |
| Total | 336.96 |
| Expenditure | |
| Claims | 275.71 |
| Logistics | 7.87 |
| MOH Support | 45.45 |
| Operational Expenses | 11.10 |
| ICT | 16.22 |
| Property | 5.63 |
| <hr/> | |
| Total | 361.98 |
| <hr/> | |
| Deficit | (25.02) |

Source: NHIS Strategic Plan 2010 - 2014

Content Analysis

Content analysis is the preferred method for analyzing both the qualitative in-depth interview and secondary data for this study. Content analysis is a detailed, careful, systematic examination and elucidation of a particular body of material with the aim of identifying patterns, themes, biases and meanings. In short, content analysis is any technique deployed for making inferences by systematically and objectively identifying special characteristics of messages (Berg, 2009). Content analysis is frequently applied to human communication; this may include various documents, transcripts of recorded verbal communications and, photographs and diagrams among others. Schutt (2009) adds that content analysis “is the systematic, objective, quantitative analysis of message characteristics” (p. 454). Accordingly, content analysis could be viewed as survey of some documents or records of prior communication with fixed choice responses that produces quantitative data. To facilitate analysis of qualitative data, and also based on questions asked, it is necessary that common themes are developed for information that tend to coincide with one another.

Themes

The nature and sorts of questions posed in the study necessitates the categorization of answers under themes in order to answer the research questions raised. This section aims at providing answer as to whether the NHIP is financially sustainable. To critically evaluate the financial viability of the program, the following themes are outlined based on answers provided by selected administrators of healthcare providers.

- a. What is the annual budget for running your facility?

- b. How much of the budget is accounted for by the NHIP?
- c. How often do you submit insurance claims, and what accounting process are adopted in submitting claims to the NHIA?
- d. How often do you receive reimbursement for claims submitted?
- e. Do you deal with other insurance agencies apart from NHIA, and what is the relationship between your facility and the other health insurance agencies?
- f. What is your personal assessment of the NHIP?
- g. What do you want to see changed in the NHIP?
- h. Do you consider the mode of implementation and enrollment of the policy as the cause of the abysmal performance of the program?

What is the annual budget for running your health facility?

As a matter of policy, respondents were not willing to provide the average budget per year for the day-to-day administration of their facilities. But respondents were unanimous in stating that the annual estimated budget for running their facilities so as to meet the needs of their clients are enormous. They were also unequivocal in stating that the average outpatient and inpatient bill per month per visit is about \$10.09 and \$53.35 respectively for the year 2013(Bank of Ghana exchange rates applied). On the average per month, a total number of between 7500 and 9300 citizens who are enrolled for NHIP seek services at district or regional hospital either as outpatient or inpatient clients depending on the population of an area. Respondents were undivided on the point that most patients usually seek services as outpatient clients.

How much of the budget is accounted for by the NHIP

Since most of the administrators interviewed were not willing to provide information about the annual budgeted figures of operation of their health facilities, this study relied on conjecturing annual cost for running a facility per month based on figures obtained for the year 2013. This figure is then juxtaposed on the annual payments/reimbursement to health facilities, obtained through secondary documents of the NHIA.

If on the average about 7500 to 9300 NHIP enrollees seek healthcare services at a hospital per month, on the low side per month, a hospital could spend about \$237,896.25; and on the high side a hospital spent about \$294,991.35. Therefore the grand average expenditure of a hospital as it relates to NHIP enrollees per month is \$266,443.80. So for the year 2013, each major hospital on the average will be incurring an estimated \$3,197,325.65 per year on NHIP enrollees who patronized the services of these hospitals. Juxtaposing the 2013 estimated annual cost for services rendered to NHIA enrollees on the 2010 claims payment as per Figure 2b, on the average per month NHIA doles out \$22.98 million for all major and other healthcare facilities in Ghana. Assuming that this amount is reimbursed to the ten regional hospitals situated in all the regional capitals, \$22.98 million breaks down to \$2.30 million, far below the estimated average cost a hospital incurs in Ghana. Implication, most healthcare organizations are either not remitted to by NHIA for services rendered to clients or they are allowed to resort to cash-and-carry as reminiscent in the 1980s.

How often do you submit claims and what accounting process are adopted in submitting claims to the NHIA?

All the healthcare administrators interviewed were of the notion that claims are submitted within the first two weeks of every proceeding month to NHIA offices. All the respondents also indicated that information about NHIP clients are entered into a computer system, hard copies are then printed and forwarded to local NHIA offices where they are vetted and transmitted to the national office for payments to be effected. All the respondents opined that before claims are submitted, they are properly scrutinized and audited by various units and personnel within the accounting divisions of their facilities to safeguard against mistakes before they are transmitted to NHIA offices.

How often do you receive reimbursement for claims submitted?

According to all fifteen respondents interviewed, all claims submitted to NHIA are required to be honored within 60 days from the date of submission of claims from their respective offices. The respondents stated that reimbursements are received most times beyond the 60 days arrangement. All the fifteen administrators agreed that it often takes beyond 120 days for most payment to be made to healthcare providers. Failure on the part of NHIA to reimburse healthcare providers within acceptable time limits, according to respondents impacted negatively on their operations. Nonpayment of claims within acceptable time periods hinders providers from taking delivery of supplies that aids in the offering of services to clients—both enrollees and nonenrollees of NHIP.

Do you deal with other private health insurance agencies apart from NHIA and what is the relationship between your facility and the other private health insurance agencies?

Respondents were divided on the cooperation with other insurance bodies besides NHIP. About 95 percent of interviewees were of the notion that certain well-known and reputed private health insurance companies made payment within acceptable time limits when claims are submitted. Others held the view that selected private health insurance bodies were worse off than the state run program, in that they have to be constantly reminded before they effect payments. Some of the respondents queried that they have to some of the times suspend services for recalcitrant private health insurance enrollees before such bodies come to effect payments to restore enrollee confidence in such organizations.

What is your personal assessment of NHIP?

All the respondents were undivided in stating that the national health insurance policy is a good program, but besieged with lots of issues. According to the respondents, government needs to take a second look at the policy by bringing all stakeholders on board, so as to be able to come out with formidable and long lasting solutions to the program. Respondents also asserted that with the high unemployment rate in Ghana, the source of funding to the program was limited and therefore could impact negatively on the program. The respondents were of the view that for the program to be financially viable there was a need for the sources of funding to be expanded. Respondents concurred that if all eligible Ghanaians are brought onboard, the program will be able to generate the needed funds to care for the health demands of all Ghanaians.

What do you want to see changed in the NHIP?

Respondents claimed the operation of NHIA is shrouded in secrecy and lacks transparency. For its operation to be accepted by the Ghanaian populace and healthcare providers, the manner of operation—“undercover” must be broken. “The bureaucracy of the implementing agency is too long,” aver all respondents, thereby affecting the communication between healthcare providers and NHIA offices and personnel. It is the wish of respondents that the chain of operation and command of NHIA be reduced to the barest minimum to facilitate faster communication between NHIA and providers as it relates to reimbursement of claims. The current trend is that providers will have to pass all claims through district offices to regional offices for onward transmission to the national office in Accra. The long chain of command thus affects quicker and faster reimbursement to providers, and also hinders the operation of providers.

About 90 percent of the respondents averred that in a new century were every human activity is done via the internet, the program should also consider going electronic. This will assist in making all communication and issues pertaining to claims electronic, thus removing all human impediments that suppresses the smooth implementation of the program.

Do you consider the mode of implementation and enrollment of the policy as the cause of the current performance of the program?

“Issues emerge for solutions to be sought to them,” declared all respondents. But in the case of NHIP, it appears government and the implementing agency has failed to redeem the image of the program as problems surfaced. It is the view of respondents that the method of introduction and implementation of the program, which is transformational and not incremental, is not to be blamed for the abysmal performance of the program. Just as any human institution, the respondents assert that whether transformational or incremental, issues are bound to happen, but it is the spate at which solutions are sought to the issues that will determine whether it would stand and survive the test of time. Respondents are further of the perception that if the government and implementing agency do not find solutions to the issues that hinder the main objective of the program, then the viability of the program will be short lived.

Content Analysis of Secondary Data (NHIA Records)

Themes

- a. Payments and frequency of payments
- b. Sources of funding of NHIP
- c. Regulations

Payments and Frequency of Payments

Over the years [2005 to 2010], NHIA has made substantial claims payments to healthcare providers across the nation (NHIA 2010 Annual Report). The report however failed to indicate the breakdown and frequency of payment made to providers, it did not also detailed how much

or proportions of claims submitted by healthcare providers were rejected by NHIA. The record specifies that claims payment for 2010 for instance, formed about 76.2 percent of the total expenditure of the program, a signal that revenues received by NHIA do not exclusively pay for healthcare needs of enrollees but expended on other auxiliary ventures as well.

Sources of Funding of NHIP

Table 5 below provides sources and contribution of funding for the NHIP (2009 NHIA Annual Report). Summarily, apart from the health insurance levy, the other sources do not fetch the program substantial revenue. Not even the Social Security and National Insurance Trust (SSNIT) contributors and premium of enrollees bring in adequate amounts of revenue compared with the health insurance levy. Thus to make the program viable, there will be need to increase the proportion of the other sources to match that of the health insurance levy.

Table 5: Sources of Revenue (Percent)

| <u>Source</u> | <u>2008</u> | <u>2009</u> |
|-----------------------|-------------|-------------|
| Health Insurance Levy | 61.49 | 61.00 |
| Investment Income | 11.78 | 17.00 |
| SSNIT Contribution | 16.87 | 15.60 |
| Premium | 5.00 | 3.80 |
| Budget Support | 4.76 | 2.30 |
| Other | 0.01 | .20 |

Source: 2009 NHIA Annual Report

Regulations

To guarantee sustainability of the program, NHIA established a clinical audit division entrusted with regular claims verification to firstly guarantee provision of quality healthcare services, and secondly minimize financial leakages by way of moral hazards. In addition, NHIA's internal audit division is augmented to effectively monitor the financial and operational processes of the program (NHIA 2010 Annual Report). The establishment of these two important units led to curtailment and reduction in financial leakages, and tightening of internal controls. Further, the internal policy measures adopted safeguarded stimulation of change among registered healthcare providers of the program. NHIA also introduced global budgeting [capitation] as a payment method that allowed providers and enrollees to share the risk associated with the delivery and consumption of healthcare services.

To reduce moral hazards and boost cost efficiency, NHIA is expected to establish a consolidated premium account that would have been operational by 2011, this account is supposed to centralize premium payment into designated accounts. NHIA will collaborate with healthcare providers to enforce gatekeeper policy to reduce inappropriate use of expensive medical equipment and procedures. It will also introduce mystery shopping, and implement uniform prescription forms to promote rational prescription (NHIS Strategic Plan 2010-2014).

Summary of Qualitative Data

The foregoing illustrates that though healthcare providers are appreciative of the NHIP concept for its role in funding the health needs of Ghanaians, they are however not at ease with the manner in which the program is administered. Claims submitted to the agency are not

reimbursed within acceptable time limits thereby affecting the operations of providers. In some cases arrears to providers are outstanding over three months; this negative attitude by NHIA does not only interrupt services of providers but negatively impacts on the impressions Ghanaians have for the program. Once bad impressions are made with respect to important policies such as the NHIP, citizens fail to sign up or tend to withdraw from the services such social policies are required to offer (Robyn, Sauerborn and Barnighausen, 2012).

Analysis of the records from NHIA proves that the agency have from year to year met its commitment by making some payments available to healthcare providers. Though NHIA over the years has met its obligation by successfully reimbursing healthcare providers, the records fail to illustrate how timely funds are made available to providers. It is in the light of how frequent and timely NHIA reimburses its clients that the program could be adequately described as being financially sustainable. A further examination of NHIA's income and expenditure for the year 2010, and projections made by NHIA for subsequent years, indicates that the program will continually be in deficit, a scenario that portrays that the future of the program is bleak with respect to viability (2010-2014 Strategic Plan).

It is evidently clear from the sources of revenue of the program that the health insurance levy is the major contributor to the fund; the other sources bring in revenue far below the health insurance levy. To be more resourceful, it is essential that government and NHIA put in plans to increase contribution to the program by the other sources listed. For instance, premium paid by clients contributes insignificantly to the program that is required to benefit enrollees. Thus premiums paid are woefully inadequate, and must be fairly increased to correspond with income

of enrollees if the program is required and expected to be viable over the years. Efforts must also be made to bring onboard the program all eligible Ghanaians and businesses including local farmers and fishermen who make seasonal income; this will go a long way to improve the financial base of the program.

The records also provides that NHIA being conscious of waste in the system is constantly reviewing its internal measures and instituting control mechanisms that will take care of all forms of financial waste in the administration of the program. It has also taking steps to unveil capitation [global budgeting] for selected healthcare providers; this step will serve as an experiment and its success will lead to a broader implementation to cover all registered healthcare providers in the country.

Chapter V: Comparative Perspective and Analysis

This chapter's overarching concern will be to elucidate a comparative analysis of the NHIP vis-à-vis other similar policies as outlined in the study. The ultimate goal of comparative study is to discover patterns and regularities of actions and behavior across cultures and nations in order to produce new knowledge and support or refine existing evidence. Consequently, comparative is so central to good analysis to achieve or obtain trends, and scientific approach is a necessary component of the comparative process (Jreisat, 2002). Though risky to transfer policies that work in one country to another, comparative analysis is useful in expanding policy choices and indicating the experience of a wide range of application. Consequently, by examining policies comparatively, discoveries can be made of how other countries vary in policies they adopt, and gain insight as to why differences exist, and identify some of the conditions under which policies transcend time or fail (Blank and Burau, 2010). Furthermore, examination of other nations' experience can illuminate difficulties they encounter, and the options used to correct anomalies as they occur. Comparative studies further embolden cross-cultural insight as to what works or does not work under an array of institutional and value background. Comparative studies also entail control—verifying or falsifying whether a claim or assertion about a phenomenon is valid by controlling for or holding constant certain variables. Control is achieved by comparative checking, that is examination of similar policies and drawing conclusion from what is being compared (Lim, 2006). While checking and controlling for

common policy problems, policy convergences are highlighted for the understanding of how healthcare policies are being shaped across nations. Health policy convergence suggests that there are global patterns in the development of health policies, thus, the objectives and activities of national health systems are becoming more synchronized (Blank and Burau, 2010). In undertaking a comparative analysis of the NHIP, this section will aim at systematic examination of alternative actions targeted at selecting one or more options to deal with perceived issues revealed in the study.

Interpreting and juxtaposing policy dynamics in and across countries warrants that delivery be made through the lens of culture, economic, political and institutional dynamics of the country or countries involved (Adolino and Blake, 2011; Jreisat, 2002). The genesis of issues leading to the emergence of the Ghanaian health insurance policy and its current state of affairs is not quite different from those stated in this enquiry. Therefore, this segment will be deduced through the concepts of culture, economic, political, and institutional factors to explain the dynamics of the Ghana national health insurance policy as enshrined in Act 650.

Blank and Burau (2010) argues that each country brings to health policy a distinctive combination of historical and cultural factors that are crucial to elucidate its proclivities and characteristics. Cultural approach to delineating social policies presumes that the social settings of a people; which include attitude, traditions, and values are vital and supportive of government intervention in social matters. Accordingly, cultural concerns tend to support governments taking lead role to execute public policies (Adolino and Blake, 2011). In Ghana just as in many African countries, where communality is the body social norm of most communities, citizens' regard

government as the body responsible for taking care of the needs of all residents including health demands. Hence the clamoring for the introduction and implementation of the NHIP, with most citizens regarding the government as father Christmas, though some residents can hardly contribute to support and sustain the social insurance program. This attitude is contrasted with the western world such as the United States, Germany and France among others where citizens are obligated to pay a fair share of price for their health needs through health insurance policies. Closely related to the father Christmas attitude in the provision of health insurance in Ghana is the notion that healthcare is a right, as such the obligation of the Ghanaian government to ensure that all citizens have access to healthcare through the provision of health insurance for all regardless of social standing (Amporfu, 2013).

Colonial legacy passed down can also be explained into why most Ghanaians do not want to substantially contribute by way of premiums to support the NHIP. Ghanaians who worked in colonial institutions were exempt from paying for healthcare services; this policy was passed down to independent Ghana, and expanded to include all Ghanaians (Adu-Oppong, Kisiwaa-Ameyay and Addai, 2010). Hence the nonpayment posture put up by Ghanaians toward the program, though some segment of society can substantially contribute to the program.

Economic explanation stipulates that the resources available to a country shape the expectations of citizens and policymakers. Economic explanation embedded in gross domestic product (GDP) growth rate of a country proclaims that if an economy is growing, policymakers might be prone to expand government activities including healthcare (Adolino and Blake, 2011). Rising GDP rates generate additional government revenue even if tax rates remain the same, in

short more money becomes available to create new programs and expand on existing ones. The Ghanaian economy experienced substantial growth rate in the last decade (Aryeetey and Kanbur, 2005), and as such might have prompted the government to implement Act 650 to support the health needs of its citizens. A paradox to high GDP in the Ghanaian situation is high unemployment, which could present a complex challenge to policy implementation. High unemployment implies citizens will be unable to make income, therefore, cannot contribute to support services that would enhance their wellbeing including social health insurance (Adolino and Blake, 2011). Though the Ghanaian economy experienced high growth rate in the last decade, unemployment still remains a greater challenge, more citizens do not have jobs, and hence their inability to sign up and support a social policy such as health insurance to cater for their health needs (Aryeetey and Kanbur, 2005). This phenomenon suggests that government will have to distribute its limited resources to assist this segment of its population, including health needs.

The political school of thought proclaims that the rise to popularity of political parties and organized labor movement influences policymaking. Parties friendly toward labor are more likely to implement policies that are labor oriented (Adolino and Blake, 2011). Labor oriented policies may include but not limited to education, job creation, and health among others. Health insurance policy in Ghana was implemented by the Kufour administration, probably because of the role played by labor unions. The cry for the introduction of health insurance in Ghana was then picked up by the then opposition party and touted in their campaigns, hence when the party was voted into power in 2002, it put in plans to roll out the policy (Ofori-Birikorang, 2009).

Partisan balance of force in a legislature and executive power also act as catalyst in the implementation of public policies. Where a party controls government and dominates the legislature, policies are implemented with little resistance because of the dominance of the party in question (Adolino and Blake, 2011). This clarifies why the New Patriotic Party was able to implement the Ghanaian health insurance program with ease because the party was in government and had the majority in parliament to sail the policy through (Agyepong and Adjei, 2008).

Institutional influence characterized by type of government, federal versus unitary likewise shape policy dynamics across nations. Unitary governments unlike federal system of governments are more able to push through policies because of the absence of competing units of governments (Adolino and Blake, 2011; Blank and Burau, 2010). In Ghana, the president is the executive officer of the nation without competing units of government as pertains in federal systems of government. As such the executive is able to implement its policies including health policy without seeking cooperation from other governments. The ease and success of the implementation of the NHIP could be attributable to the type of government practiced in Ghana.

In addition to the factors enumerated above, Blank and Burau (2010) are of the view that quantitative approach—functionalist/structuralist could explain why policies are initiated and adopted by nations of the world. As demographic characteristics change overtime within a country, the changes could trigger policy directions. Over the years after it gained independence in the late 1950s, the Ghanaian population has more than doubled, however, social amenities including healthcare services continued to stagnate; this resulted in the overstretch of existing

institutions serving the expanding population. The discomfort created by population growth with corresponding stagnation in social policies called for the government to act to alleviate the social plight of most citizens especially the vulnerable in society. The singular explosion in population growth coupled with other factors necessitated a change in policy direction including healthcare policy and social health insurance in Ghana.

The NHIP vis-à-vis Health Insurance Policies in Selected Developed Nations

Comparing the Ghanaian model to that of advanced economies, a clear cut difference can be made of the two, especially in respect to approach to implementation of programs in developed nations, which in most instances lead to financial sustainability. While the Ghanaian program was comprehensively implemented, that is covered every segment of the Ghanaian population (Act 650), in developed economies, the policy was implemented progressively (Adolino and Blake, 2011).

Germany was the first to advance health insurance policy in the developed world. It implemented the policy incrementally; this enabled policymakers to tactfully transcend all teething issues that come along with new policies. Thus, Germany was much placed to make its policy sustainable because of the experience it built over the years following the slow but steady method of executing the policy (Barnighausen and Sauerborn, 2002). The Ghanaian model was rolled out comprehensively; implying policymakers did not have the opportunity to understudy issues as they emerged as happened in the German model. Coupled with low GDP and high unemployment rate, and lack of administrative experience in managing health insurance policies, the Ghanaian model is more susceptible to failure as marked by continually being in arrears and

deficit to healthcare providers as captured in 2010-2014 Strategic Plan. Another marked difference between the German model and the Ghanaian system is, with time, Germany allowed employers and employees to manage their funds, with national institutions serving as regulators (Altenstetter, 2003). The federal government of Germany became the main regulator of health insurance, with states managing funds within their jurisdiction. The Ghanaian system though managed at various local units within the country, the national headquarters retains major roles with respect to supervisory of district mutual funds; and reimbursement to health providers. The long chain of command designates that payments are most often delayed, and communication from the local offices to the national headquarters could take excessively longer periods of times (Chankova, Atim and Hatt, 2010).

The Japanese model offers a contrasting difference with the Ghanaian model. The Japanese program was built on occupationally grounded government-mandated insurance plans, which was implemented slowly and expanded gradually to cover most employment groups (Nakatsuka et al., 1991; Kuriyama et al., 2004). The Japanese model mandated employees to be signed up to employers' health insurance plan, with both the employers and employees contributing toward a fund that takes care of employees' health needs. Though a communal society, employers in the Ghanaian model do not contribute to the fund. Contributing to the fund is the sole responsibility of enrollees and the National Health Insurance Fund (NHIF) which draws its revenue mainly from value added taxes on selected goods and services (Act 650, Section 33 and 34). In addition, patients under the Japanese program copay for all treatment and are reimbursed at later dates (Kupor, Liu, Lee and Yoshikawa, 1995). Under the Ghanaian

model, there is no copay and the fund reimburses healthcare providers for the total cost of treatment. Considering that Ghana is a developing country, with low GDP; but with a lot of issues on its agenda table, the national budget cannot support all social needs of citizens including paying for health needs. Act 650 should have mandated employees and employers to take up the health concerns of citizens in employment, with the poor, unemployed and the vulnerable carefully screened and handled by a budgetary allocation.

Another unique feature of a developed nation's health insurance policy, but different from that of Ghana is the French national policy. It is unique in the sense that it is organized on the basis of occupation. Thus making it possible for sub groups to take into account the socio-economic status of its members', and hence determine their contribution to a fund. The French NHI evolved gradually with initial coverage limited to salaried workers in industry and commerce, and gradually expanded to cover every segment of the society by the 1970s (Adolino and Blake, 2011). Physicians under private practice are paid directly by patients, and patients are subsequently reimbursed by their local insurance funds. Public hospitals are catered for by a global fund. The Ghanaian system lacks classification; all beneficiaries are lumped together and made to pay the same premium, with the exception of SSNIT contributors who pay a portion of their income toward the fund (Act 650).

The Korean program just as nations of the other developed world was implemented incrementally. It begun with mandatory enrollment for all employees and their dependents, and gradually expanded to all other sectors of the economy. It is regionally based thereby making it possible for all the regions to manage each area according to its characteristics including

economic weakness and strength (Yang, 1996). The Ghanaian system was a wholesale launch without regard to the socioeconomic factors of each region. Taking into account the socioeconomic factors of the regions would have enabled policymakers' design premiums that fit the needs of citizens of each region, a similitude of the Chinese situation; and enhanced confidence beneficiaries have for the program. Furthermore, all cost and payments under the Ghanaian regime are handled by NHIA (Act 650), thus putting too much stress on the limited financial resources of the agency. Considering that about 18 million citizens are enrolled by the program, and a substantial increase in visitation rates over the years, with a corresponding limited revenue base for the program (2010-2014 Strategic Plan), if NHIA thus not streamline its payments method to conform to the Korean regime, the system may end up collapsing itself (Yang, 1996).

The Ghanaian regime though mandatory does not have a penalty provision as enshrined in the PPACA of the United States. While in the US, individuals are mandated to register or otherwise pay a penalty for failure to register, the Ghanaian system does not hold eligible individuals accountable for refusing to enroll. The implication is that contribution would be limited and government is burdened with the responsibility of taking care of the health needs of citizens who could otherwise pay to support the program. To sustain the NHIP therefore, government must back it up with a penalty clause that will oblige citizens to enroll and pay their quota toward the program. A penalty clause will guarantee a large number of eligible citizens signing up for the program, thereby increasing its revenue base and consequently ensuring the sustainability of the program (Carrin, Mathauer, Xu and Evans, 2013).

The NHIP versus Health Insurance Policies in Selected Developing Countries

Countries of the developing world enumerated in this narrative also offer a contrasting difference in their approach to UHIC to that of the Ghanaian system. Some of these differences could serve as a standard for reforming the Ghanaian model.

Under the Chinese model compared to the Ghanaian NHIP, employees are required to bear about 10-20 percent of all medical cost up to a certain ceiling; intent was to prevent moral hazard. Employers and employees contribute six and two percent monthly respectively toward a socially pooled fund. Contribution rates are dependent on economic indicators, thus contribution from employers and employees could be increased or decreased depending on the general economic condition of the nation or province. This act puts limited stress on funding for the program (Wong, Tang and Lu, 2006). The same cannot be said of the NHIP, which puts too much stress on limited government revenue to cater for enrollees who pay low premium and indigents who are exempt as specified in Act 650. Policymakers in Ghana failed to pilot the program as happened in other systems; hence there were no options to get rid of mishaps before replicating the project to the entire country. For instance, the Chinese approach was piece meal in nature and therefore gave the implementers the opportunity to eliminate mistakes before replication to other provinces.

A striking difference between the Ghanaian approach and the Taiwanese style is how planners in Taiwan undertook a study of various insurance policies of other nations before carving out one that fits the Taiwanese milieu (Cheng, 2003). The Ghanaian planners for the sake of political expediency did not understudy other models before carving out one for the

nation (Ofori-Birikorang, 2009). This might have necessitated the weaknesses experienced in the policy as captured in its inability to make prompt reimbursements to healthcare providers. The Taiwanese model is financed by individuals, employers and government; the same cannot be said of the NHIP of Ghana. Premium revenue constituted 32.51 percent of total revenue of Taiwan's social insurance, compared to only five percent premium revenue of NHIP in 2010. This phenomenon indicates beneficiaries under the Ghanaian program either contribute very low toward the program or do not just pay anything toward the program. The scenario points to the fact that if revenue sources of the program is not diversified, there is the tendency that the NHIP may not be able to sustain itself financially. Another marked feature of the Taiwanese model is the proportion of premium paid by individuals, employers and government. Employees of public and private enterprises pay 30 percent, employers 60 percent and the government contributing the other ten percent (Cheng, 2003; Lee et al., 2010). The same cannot be said of the Ghanaian model where enrollees contribute five percent as premium toward total revenue of the program, a state of affair that could threaten the financial sustainability of the program (Chankova, Atim and Hatt, 2010).

The Ghanaian model bears marked dissimilarity with the health insurance policies of other developing nations. These differences offer very important clues to policymakers in Ghana if sustainability of the program is what they stand to achieve. The Vietnamese health insurance program is two-tier, compulsory and voluntary; unlike the Ghanaian system which is one uniform policy for all its nationals. The compulsory program captures civil servants, employees of state and private enterprises, retirees and the very poor and vulnerable in society. The

voluntary program is designed for citizens who do not fall under the compulsory program (Nguyen and Knowles, 2010). A third policy, solely to take care of the poor and needy are put in place by the Vietnamese government (Ekman, Liem, Duc and Axelson, 2008). The Indonesian mandatory health insurance is classified under three categories, the *Askes* which covers civil servants, pensioners, and all eligible family members. The *Jamsostek* is mandatory for employers who have up to ten or more employees; and the third *Asabri* covers members of the security services and their eligible dependents (Cuevas and Parker, 2010). Weaknesses and poor coverage in the Indonesian model led its government to institute reforms in 2004. Chile incrementally launched social health insurance in the 1920s, the program expanded steadily to cover every facet of health delivery services. The SEREMENA covered preventive medicine for white-collar workers; the SNS took care of blue-collar workers and by the 1980s, the Chilean government had undertaking reforms in healthcare financing. Reforms aimed at expanding healthcare financing that will involve the private sector. SNS was also decentralized to regions, and legislation was passed to involve private entities in the administration of health insurance programs (Barrientos and Lloyd-Sherlock, 2000).

The Colombian and Argentine policies do also bear some striking distinction with the NHIP. The Colombian approach, guided by the principle of solidarity financing and cross subsidy makes it possible for high income earners to contribute a higher portion of their earnings toward the health needs of the poor and vulnerable in society (Ruiz, Amaya and Venegas, 2007). The Colombian system also made it possible for the poor to be identified and classified; thereby ensuring that funds are channeled to these categories of individuals considered poor (Ruiz,

Amaya, and Venegas, 2007). This practice is absent in the Ghanaian scenario, thus making it difficult to target citizens who are truly poor and vulnerable. In addition the Colombian policy has copayment rates depending on one's income, and all medical procedures are not covered. Implication, the Colombian national insurance policy is able to harness adequate funds to meet its eligible enrollees including the poor and the vulnerable as a result of the classification of the poor members of the program. The Argentine model though mandatory is made up of private and public insurance bodies. Dissatisfaction with the system warranted reforms which saw expansion with private participation in social insurance and healthcare delivery. Reforms made it possible for employees to participate in one or more social health insurance groups (Barrientos and Lloyd-Sherlock, 2000; Bertranou, 1999). Ghana could follow the footsteps of Argentina to reform its program to reflect its current economic trend.

The Rwandese program like most other programs is dual in nature, formal and informal coverage. All public sector employees and eligible dependents are required to sign up with the formal sector coverage. The informal sector coverage which consists of community based health insurance covers citizens who do not fall under the formal system (Lu et al., 2012). The second phase of the Rwandese health insurance project was rolled out incrementally in 1999 and 2000. The success of piloted programs engendered the government to replicate same in other districts overtime. Members of mutual funds are required to pay ten percent of their cost of medical services out-of-pocket, a cost containment strategy for the program, this approach stumps out moral hazards and guarantees financial sustainability of the program (Hong, Ayad and Ngabo, 2011). To further warrant sustainability of the informal health insurance program, the system

maintains a gatekeeper approach where enrollees are allowed to first report for services to be rendered to them before if need be, they are then referred to district hospitals for further treatment. Funding for the Rwandese community based health insurance is diverse, premium revenue forms fifty percent of the package, other sources include contributions from charitable organizations, support from Rwanda's development partners; and budgetary allocation from the national kitty. Unlike the Ghanaian system, providers are paid through monthly capitation rates on fee-for-services basis (Lu et al., 2012). To guarantee success of the Ghanaian program by preventing moral hazards, a copayment component should be introduced to fall in line with Rwandese program. The gatekeeper principle should be strictly adhered to by the Ghanaian regime to ensure judicious use of the programs limited resources.

The table below provides a comparative features of some selected UHIC policies against the NHIP.

Table 6: Summary of Comparative Analysis of the NHIP with Selected Countries

| Country | Type of Insurance | Method of Implementation | Sources of Funding | Employer Contribution | Employee Contribution |
|----------|--------------------------------------|--------------------------|------------------------------------|-----------------------|-------------------------------------|
| Germany | Mandatory social health insurance | Incremental | Employer Employee | Yes | Yes |
| Japan | Compulsory social health insurance | Incremental | Employer Employee Government | 50% of insurance | Copay Premium 8.2% - 9.45 |
| S. Korea | Compulsory national health Insurance | Incremental | Government Employer Employee | Yes | Premiums Out-of-pocket |
| China | Social health insurance | Incremental | Employee Employer | 6% premium | premium 2% Copay 10% - 20% |
| | Compulsory | | Employees | | |

| | | | | | |
|----------|---------------------------------|-------------|----------------------------------|----------------|------------------|
| Taiwan | social health insurance | Incremental | Employers Government | 60% premium | 30% premium |
| Colombia | Government Private insurance | | Government Employees | | Premium Copay |
| Rwanda | Government CBHI | Incremental | Premiums Donors Government | | Premium Copay |
| Ghana | Government CBHI Private | Widespread | Government Employees | | Premium |

Summary

Comparison will serve as fair basis for drawing up conclusion for social policies including the NHIP (Lim, 2006; Adolino and Blake, 2011). Critical evaluation of similar policies will serve as benchmark for upholding or rejecting the null hypotheses stated under chapter III. It is evidently clear from the foregoing that Ghanaian policymakers responded positively to the need of citizens at the time the NHIP was implemented; however, inadequate preparation toward implementation meant that administrators of the program were ill-prepared to counter issues that were likely to militate against the program during its nascent and late stages in its development. Ill-preparation is showed-cased in the level of criticism leveled against the program by interest

groups, citizens and politicians (Apoya and Marriott, 2011; Anane, 2011). This could have been averted if policymakers had provided benchmarks by way of studying similar policies such as the Taiwanese did. Another factor that was overlooked, and that could have led to making the program more viable before its implementation, was the failure of the Ghanaian authorities to consider the economic background of the country. GDP is low though the country experienced some level of growth in the last decade (Aryeetey and Kanbur, 2005). Implementing a policy important as universal health insurance coverage warranted that the government should have carefully considered the budget allocation to the program, and whether it was capable of sustaining the annual budgetary allocation to the sector. This was ignored, hence the current predicament of the NHIP—arrears in reimbursement to healthcare providers for services rendered to enrollees and their eligible dependents (NHIA 2010-2014 Strategic Plan).

Another concern for the NHIP is the fact that the informal sector dominates the Ghanaian economy, and structures rarely exist to capture data of this segment of the economy. For a vital policy such as the NHIP to be sustainable, it is imperative that coverage is diverse (Carrin, Mathauer, XU and Evans, 2013). Coverage can be wide if employees of the informal sector are incorporated into the fold of the program, this can be achieved if data for the informal sector is readily available. The NHIP is further weakened in the sense that though mandatory, there is no penalty clause if one refuses to register, therefore making it easy for qualified individuals to opt out of the program thus limiting its resource base. This trend threatens the viability of the program.

In some developed and developing nations, it is incumbent upon both employers and employees to contribute toward social insurance programs. The essence is to guarantee viability of such programs (Adolino and Blake, 2011; Lu et al., 2012). The Ghanaian situation is different; employers do not contribute to the NHIP, thereby limiting the resource base of the program. Unlike other programs, the enrollees of NHIP do not have to copay, a situation that puts too much stress on the limited resources of the program.

Chapter VI: Discussion, Conclusion and Recommendations

This study unearthed the evolution of the Ghanaian NHIP, and implemented a mixed method approach to answer questions pertaining to equity of coverage and financial sustainability of the program. The study further provided insights as to how the Ghanaian regime is managed and ran. The inquiry also outlined similar policies in other nations to serve as benchmark for assessing the NHIP. Since individual national policies tend to coincide with one another, benchmarking aided as the basis for a fair articulation of the state of affairs of the NHIP (Blank and Burau, 2010). It is also important to note that this study is based on Przeworski and Tuene (1970), assertion that in social science research, the generality and parsimony of theories surpasses their accuracy. The study also adheres to Tabachnick and Fidell (2007), postulation that in social science research the process of rejecting other variables due to statistical significance may be misleading.

Review of Findings:

1. Equity of Coverage

From Appendix IV, it can be observed that 89.60 percent of eligible citizens interviewed are covered under public health insurance managed by the NHIA, compared to 9.17 percent and 1.22 percent for private and community based health insurance respectively. A signal that NHIA with a limited revenue base is over burden with large number of enrollees, a majority of whom contribute little by way of premiums to sustain the program. A further review of Appendix IV indicates that adverse selection is not an issue for the national program as only 31 people who consider themselves not very healthy are registered to partake in the health insurance programs

compared to 113 healthy and 88 very health enrollees. Sixty-three percent of males interviewed compared to 37 percent of females interviewed are registered for health insurance; 97 rural dwellers interviewed compared to 230 urban dwellers interviewed signed up for health insurance under Act 650. Occupation wise, out of 185 government workers interviewed, 88.65 percent are registered for health insurance with only 11.35 percent not registered. This is contrasted with 70 percent of registered unemployed persons and about 30 percent unemployed persons not registered from out of 30 eligible persons in this category. Appendix IV further indicates that the relative proportion of individuals in high income brackets who have signed up for health insurance is higher than those in lower income brackets. Almost the same proportions of individuals from all the income groups are not registered for health insurance, with the exception of individuals in the C501-C1000 income bracket where only 7.62 percent of individuals have not signed up for health insurance policy.

The binary logistic analysis presented in Table 1 indicates that for every individual who enrolls for NHIP, the probability of a female enrolling for the program declines. That is, more males compared to females are registered to benefit from the NHIP. Table 1 further establishes that with every individual enrollment for NHIP, the proportion of individual income that pays for premium decreases by -.114, and services covered by the program also reduces by -.041. An indication that as more citizens are roped into the program, the proportion of income that pays for premium falls; while the services NHIP is supposed to cover also slides down. A signal that premium of enrollees are less than proportional to the income of enrollees, thus making the program vertically and horizontally inequitable. Services covered by the program also slides

down affecting the overall benefits enrollees are required to receive as specified in the act. Lesser proportions of income contributed toward premium, also implies, the financial viability of the program is likely to be threatened. The health status of citizens' who enroll goes down by -.097, indicating that more healthy people are enrolled compared to a smaller fraction of non-healthy enrollees. This also implies that adverse selection is not an issue that will likely militate against the program. All the other independent variables; age, marital status, type of residence (rural versus urban), occupation, education and income have positive log odds, p-values notwithstanding; a proof that the NHIP possesses some characteristics of equity of coverage thereby meeting its objective as outlined in the Act. These characteristics are clearly captured by the percentage columns of Appendix IV. Thus more than fifty percent of all these variables which constitute the socioeconomic features of citizens are captured in the NHIP enrolment.

Table 2 summarizes all predictor variables that affects why eligible individuals fail to sign up for the NHIP. The correlation (R) and coefficient of determination or goodness of fit (R^2) indicate that there is a strong relationship between the dependent and independent variables, statistical significance notwithstanding. A closer examination of Table 2 signifies that gender, age, marital status, education, total in household and type of residence (rural versus urban); all play positive role and therefore have very high influence on eligible citizens' failure to sign up and utilize the program. Income, occupation, and health status on the other hand play lesser role in the non-enrollment status of eligible enrollees. Household members' registration and impression of the NHIP per Table 2 are very marginal though influence non-registration in the positive direction.

2. Financial Sustainability of the NHIP

It can be surmised from the content analysis of response from healthcare providers that, the average attendance of NHIP enrollees per month at hospitals are quite enormous, and therefore, healthcare providers will continually submit returns to NHIA for reimbursement for services rendered to clients. It is also evidently clear from the cost estimates of healthcare providers and NHIA claims payments (NHIS Strategic Plan 2010-2014), that healthcare systems are constantly under reimbursed from NHIA or NHIA is perpetually in arrears to healthcare systems. Under claims management of the 2010 Annual Report, it states that there have been delays in submitting claims by some service providers, which is attributable to inadequate capacity in the preparation and submission of claims by some healthcare providers. Similarly NHIA satellite offices do not have the capacity to vet claims effectively and hence the two inadequacies culminate in delays in claims payment by NHIA. The trend affects sustainability and also indirectly hinders the operations of healthcare providers. To hasten up and facilitate early transmission of returns from healthcare providers to NHIA, so as to reduce delays in reimbursement, most providers endorse the introduction of electronic transactions. This they believe will shorten the numerous bureaucratic channels that impede claims processing and payments.

It is important to underscore that for the program to persist and attract all citizens; providers should and must have good impression about the NHIP. Good impression by healthcare providers should encourage them to urge more citizens to sign up for the program thereby broadening its revenue base. When bad impressions are created, the tendency is that

health workers will be prone to discourage citizens who have signed up for this very important national policy to back out, and thus, eventually reduces the revenue base of the program (Robyn, Sauerborn and Barnighausen, 2012). When the revenue base of the program shrinks, a lot of pressure will be put on the limited resources of the program which may eventually lead to its collapse. To sustain the program therefore, policymakers must make it a priority to ensure that healthcare providers are reimbursed within acceptable time limits so as to encourage them in having confidence and faith with the policy.

Healthcare providers from the interviews were unanimous in asserting that the program was comprehensively and quickly rolled out without making provision for unseen contingencies. Healthcare providers were also quick to add that hasty implementation of the program should not deter policymakers in making the necessary amends to facilitate the achievement of the overall objective of the program—healthcare services is a necessity and must reach all Ghanaians who need it.

Sustainability strives on available revenue and prompt reimbursement to healthcare providers. Diverse revenue source and fair contribution from all sources guarantees sustainability and, hence speedy reimbursement of funds to healthcare providers (Carrin, Mathauer, Xu and Evans, 2013). Examination of NHIA records signals that the agency over the years has made funds available to service providers (Figure 2b). What is not traceable in the records is the frequency at which reimbursement are made to providers. The nonexistence of sequence of reimbursement makes it difficult to substantiate assertion by providers that refunds from NHIA are repeatedly in arrears. Apart from delays in releasing funds from NHIA to health systems, a

look at Figure 2c indicates that the revenue base of NHIA is too narrow and hence cannot cater for the about 18.30 million enrollees as per Figure 2a. Taking into account the fact that between 7500 and 9300 enrollees on average per month seek medical services at major hospitals; sustaining the program with such revenue base may prove a difficult task as the years roll by. The tendency for the system to fail if the trend continues with narrow revenue base is evidenced by enrollees' utilization of healthcare facilities as captured in National Health Insurance Scheme Strategic Plan 2010-2014. According to the report, in 2010 about 17 million outpatient department utilization was registered by healthcare providers in Ghana. Prior to 2010, utilization trend by NHIP enrollees had constantly been increasing since the inception of the policy.

Under sustainability heading of the 2010-2014 Strategic Plan, it is stated categorically that, "the biggest challenge facing the NHIS is sustainability as expenditure exceeds inflow. It is projected that at the status quo, without any reforms, the fund would be depleted in 2012" (p. 68). The 2010 annual report reinforces this assertion; it states, "financial sustainability of the scheme remains a big challenge to management given the increasing demand for health insurance and its consequent increase in healthcare service utilization. It is projected that without any additional sources of funding to the current sources, the NHIF risks of dipping down by the close of year 2012" (p. 32). Indeed policymakers are well aware that if no changes are introduced to the current state of affairs of the program, it is bound to fail, and most Ghanaians would have no option than to go back to the days of cash-and-carry. Sustainability also demands cutting down on cost and reduction in inappropriate use of funds. The 2010 annual report stipulates that non-enforcement of gatekeeper role, and abuse of free maternal health accounts for 76.2 percent

of total expenditure of NHIA. In addition, the program faces high operational cost attributable to weak controls and non-standardization of operation. To be viable over a long period of time as happens in advanced economies; there will be a need to put in place adequate checks and controls to warrant optimum use of resources to the benefit of enrollees (Ibrahimipour et al. 2011).

Just as the Chinese model strives on market forces (Wong, Tang and Lu, 2004), for the Ghanaian model to attain the status of equity of coverage and financial sustainability, aside broadening the revenue base of the program, it is incumbent on policymakers to ensure that the program operates under the influence of market economy. Since the policy was first implemented, it has not experienced major reviews in premiums thereby dwarfing the objective of the program (2010 Annual Report). With the annual increase in enrollment, the program has not been able to harness the needed revenue to reimburse healthcare operators within acceptable time limits. If the trend is allowed to continue without major reforms, the limited generated revenue for the program will not be able to cater for enrollees, and will thus subsequently lead to the collapse of the program. To safeguard equity of coverage and financial sustainability of the program, all sundry involved and enrolled in the program must be made to pay a fair share toward the program according to the dictates of the macroeconomic conditions of the time. Adhering to macroeconomic conditions will guarantee adequate resources to the program to pay for the health needs of all those who participate in the national program.

From the analysis, it can be inferred that despite the challenges faced by the NHIP, the program is partially financially sustainable. This is demonstrated by the fact that the program has

shown a consistent flow of some revenue though inadequate to finance healthcare organizations registered under it.

Auxiliary Issues and Recommendation for Reforms

Another issue of concern is total number of enrollees in the Ghanaian program. According to the 2010 population census, the total population of Ghana is about 24 million. Per the 2010-2014 Strategic Plan, by the close of 2010, the NHIP covered about 18 million citizens which accounts for about 75 percent of the population. In the 2010 Annual Report of NHIA, it is stated that active membership of the program stands at about 8 million that is 34 percent of the total population of Ghana at the close of 2010. The mismatch of figures by the agency implementing the health insurance program indicates that inaccurate records are kept about the total number of enrollees in the program, probably confirming Anane's assertion that the politicization of the NHIP is the bane of its complete failure to meet its major objective—covering all eligible Ghanaians. To be scientific in approach to policy administration, it is advisable that accurate figures are kept by the implementing agency so as to be able to project the trend of affairs and to be able to manage and plan for any mishap that may arise. In the absence of accurate data, management and delivery of services may amount to guesses and could lead to misadministration of public programs important as a national health insurance policy. Numbers stated in the statistical analysis notwithstanding, providing equity of coverage has been the bane of NHIA. The 2010 annual report states emphatically that, the program is pro-poor, yet the system had failed to capture this segment of the Ghanaian population. The report further states that the inability to enroll the poor could be attributed to the difficulty to identify this

segment for exemption. To warrant equity of coverage, the program must put in measures not just to broaden the revenue base of the program but identify the poor and vulnerable in society, register them and with time subject them to contribute a fair share toward the program as happens with the Rwandan program (Makaka, Breen and Binagwaho, 2012).

In many other health insurance programs across the world beneficiaries are made to copay to support their health needs (Ruiz, Amaya and Venegas, 2007; Yang 1996; Kuriyama et al. 2004). The same situation does not apply to the Ghanaian program; enrollees do not have to copay for all treatments. Costs of treatment are basically free for all sorts of ailments and related services. This state of affairs for the Ghanaian model may breed moral hazards and if unchecked will end up collapsing the system.

Research Implications

This study presents an evolving phenomenon that engulfs policymaking in developing countries especially those in sub-Saharan Africa. The speed with which governments embark on policy implementations and the lackadaisical approach adopted to ensure that such policies meet the test of time. The Ghana NHIP is no exception. Therefore, after a decade of Act 650, and considering the lukewarm attitude approach to enhancing policies in Ghana, this dissertation attempts to find out whether the Ghanaian UHIC is capable of sustaining itself financially and equitable in coverage. Responding to the questions posed in the study will give credence to the fact that the answers may have myriad implications for policymaking in developing countries as it relates to universal health insurance coverage.

The first implication of this study to policymakers and beneficiaries is that UHIC when properly implemented serve as an improver of health outcome for all citizens no matter their economic and other social standings. The Taiwanese example has indicated, with proper and scientific approach to decision making, a policy such as health insurance could not only be sustainable but can be equitable in coverage so no citizen is left out of the policy. For instance, as a result of the careful implementation of the Taiwanese model, the average visitation rate to physicians shot up to 14 visits in 2004, a manifestation in improved health outcome for most Taiwanese citizens (Wen, Tsai and Chung, 2008).

This study has shown that there was a political will to implement the NHIP at the time it was put into effect, but the technical knowhow in terms of human and material resources to aid in the proper execution of the program was inadequate (Ibrahimipour et al., 2011). What was advisable at the time of implementation was to roll out the policy on pilot basis as happened in the Rwandan model. This approach would have provided policymakers in Ghana the opportunity to envisage problems that would arise, and aid them in mainstreaming measures to deal with the issues as they emerged (Saksena et al., 2011). Considering the state of affairs as captured in the analysis, and for the program to meet its set objective, there is need for realignment of the Ghanaian regime to fall in line with other programs especially the Taiwanese and the Rwandan models.

Timely and or untimely refunds to healthcare providers can influence enrollment into a health insurance program. Timely refunds encourage providers to stimulate clients to stay in programs and also encourage nonenrollees to register. The opposite, similarly holds if refunds

are delayed (Robyn, Sauerborn and Barnighausen, 2012). For the Ghanaian program to make a positive impact and thereby increase the health outcome for the entire citizenry, it is important that health personnel bear positive impression about the program. Opinions solicited from healthcare providers indicate there is a general bad perception for the policy. Bad perception follows from the nonconformity to timely refunds from NHIA to providers. If the trend continues, the tendency is that healthcare providers may encourage their clients to opt out, thereby impacting on the revenue of the program. Healthcare providers may further discourage nonenrollees to stay out of the program. Therefore, to make the program sustainable, policymakers must ensure that providers of healthcare have positive image about the program by sticking to acceptable time frames of refunds.

It has also been demonstrated in this study that diverse and fair contribution toward financing the program guarantees sustainability. The revenue source of the NHIP is narrow, and premium contribution by enrollees toward the program has never been reviewed since the program's inception. The average enrollee per survey contributes between 0 to 20 percent of their income on premiums (Appendix IV). Though may be considered equitable, if the trend is allowed to continue without regard for macroeconomic indicators of the nation as pertains in the Chinese model, the program may eventually collapse. Thus enrollees should be made to pay "realistic" premiums taking into account their socioeconomic standing so as to prevent the defeat of the purpose of the program—health discrimination based on income status.

Another major factor that hinders policymaking in Africa, as in Ghana is the dominance of the informal sector with inadequate records to capture the demographics of this segment of

their economies. Atanasova et al. (2011), states that to have effective and sustainable health insurance programs, information on insurance rates and other demographic variables are prerequisite. Data on the informal sector is woefully inadequate in Ghana, and thus affects decision making including issues relating to health insurance policy. To enhance and facilitate decision making, it is important that agencies keep and maintain accurate data, which must include data from the informal sector.

Study Limitations

Though an important study considering the significance specified in chapter I, and though the study also provided insights as to the factors affecting the NHIP, the study encountered some shortfalls by way of limitations. As a consequence of limitation, it will not be justifiably fair to use this study as a standalone benchmark to generalize and draw conclusion on the Ghanaian UHIC.

Financial constraints posed a major problem for this study. Attempts to amass enough resources to be able to include more sample areas into the study failed. As a result of restricted resources, the study could not include many more sample areas so as to reach a larger more scientific sample size. For instance, it became impossible to travel to several rural areas to interview and cover a lot more rural dwellers. This segment of the population is estimated to be about half the total population of Ghana (2010 Population and Housing Census). Hence it was necessary to have incorporated higher proportions of rural inhabitants into the study. Rural populations also constitute the poor and the very vulnerable who are deemed not to be covered under the NHIP (Chankova, Atim and Hatt, 2010; Amporfu 2013).

Another issue that affected this study was the unwillingness of the NHIP administrators to grant an interview on its operations. A visit to the headquarters of NHIA in Accra, Ghana, and other satellite offices; and presenting them with an official letter stating the intent of the study did little to convince personnel of the agency to grant an interview on the operation of the program since the passing of Act 650. Thus the absence of professional and central administrative assessment of the program from the implementing agency hinders a full generalization from this study to the Ghanaian situation.

It would have been worthwhile to add a program evaluation section to this study, but again the inability to get NHIA personnel to cooperate and hence facilitate the extraction of vital information, made it difficult to add such a section. Another important issue neglected by this inquiry entails relating health outcome of enrollees taking into account their socioeconomic dynamics. To be equitable, the difference in health outcome for all enrollees must not be vast, thus all citizens must have the same potential in attaining their needed health status (Chang, 2002). To fully ascertain equity of coverage of the Ghanaian program, there is need to relate health outcome for all enrollees and finding out whether they all had equal chances of meeting their intended health outcomes.

Conclusions

Despite the challenges enumerated, the study has been able to provide an empirically based picture of the present state of the NHIP as per analysis above. The intent and central focus of this study is to determine whether the NHIP is financially sustainable and equitable in terms of

coverage. Both the quantitative and qualitative analyses provided the general level of the state of affairs of the program given the data made available for this study.

The logistic analysis specified that the predictor variables are directly linked to the outcome variable with a model of fit of 80.70 percent and p-value of .001. This paved the way to determine whether the NHIP is equitable by way of determining the log odds of the predictor variables against the outcome variable. Table 1 indicates that, p-values notwithstanding, the log odds [equity of coverage] of an individual signing up for the program favors age, marital status, education, residence (rural or urban), occupation, income and number in household. With residence, the odds of registration for the program increases for urban dwellers as compared to rural dwellers. The log odds for gender, health status, proportion of income that pays for premium and services covered by insurance are all in the negative [fairly inequitable]; implying, as individuals sign up for health insurance, these variables decline in relation to the other variables specified in the analysis. The following were also fairly inequitable: the odds for “does your premium pay for all services,” decreases for “no” as compared to “yes.” The same scenario is captured with gender; the log odds of females signing up for an insurance program declines further compared to males who enroll in the NHIP.

To further determine equity of coverage, the study also undertook an inquiry as to why eligible citizens fail to sign up for health insurance. Among the variable imposed on the dependent variable “relationship” and covered under household members’ were significant, denoting the two variables are crucial in determining why citizens fail to sign up for health insurance. Table 2 summarizes the relationship between why eligible individuals refused to sign

up for the NHIP, in relation to the independent variables. To measure the sustainability of the program, a regression analysis (Table 3) depicts that “reasons” provided by respondents were significant and impacted directly and positively for motives enrollees and non-enrollees assign to question posed as to whether the NHIP is sustainable.

The content analysis of interview granted healthcare providers calls for government and the implementing agency to pay special attention to the following if survival and sustainability of the program is to be achieved. From this presentation point of view, these recommendations seem fair and useful match for the Ghanaian system to achieve its missions in the future. First of all, government must streamline the operation of the NHIA so as to ease the work of healthcare organizations. It is important that NHIA’s method of operation, changes from manual to electronic. It is also vital that the long bureaucratic command is reduced to facilitate communication between healthcare organizations and NHIA. Shortening the bureaucracy and introducing electronic transactions will facilitate prompt reimbursements and communication between NHIA and all service providers; and thus, go a long way to enhance the confidence, both providers and citizens, will have for the program.

Honoring prompt refund of claims to healthcare providers should be placed high on the agenda of NHIA. Most healthcare organizations strive on refunds of services rendered to clients; therefore delays in making prompt payments affect their day-to-day operations. The long run effect, if claims are refunded within acceptable time limits, providers will be predisposed to encourage their patrons to stay in the program, but where this is not forthcoming, personnel of healthcare organization may be inclined to discourage clients to sign up for the program.

Secondly, transparency in the operation of every organization including health insurance programs breeds confidence by persons and organizations who patronize such bodies. Perception by healthcare providers that NHIA's operation is shrouded in secrecy does a lot of harm to its image. To breed confidence for the organization, NHIA must realign itself to open and transparent operation. Healthcare providers envision that government and NHIA will be proactive rather than reactive in responding to issues affecting the smooth implementation of the program. Healthcare operators also opine that issues pertaining to funding will always arise, but early and timely response and intervention measures put in place may in the long run sustain the program.

Finally, skimming through NHIA records, the following general conclusion can be drawn: that the national government of Ghana and the implementing agency need to update and upgrade the operation of the Ghanaian health insurance program to fall in line with global trends. In advancing equity of coverage for all residents of Ghana, government must ensure that premiums paid by beneficiaries gradually reflect economic conditions as pertain to the Chinese regime, that is, use more market based options. Premiums that reflect the macro socioeconomic dynamics will increase the revenue of the program thereby increasing financial sustainability. Evidently, NHIA has made efforts to ensure sustainability of the program by plugging some loopholes that drain the financial resources of the program, but more preventive measures need to be operationalized to have zero tolerance for leakages of the program's financial resources.

It is also important that government finds solutions to the lack of adequate records for the informal sector of the country. Adequate records will guarantee roping that segment of the

population in decisions relating to social policies including the NHIP. It will also guarantee a broad revenue base of the program if this segment is eventually roped into the policy. And to quote Amporfu (2013), “for universal coverage to be achieved through the NHIP, all Ghanaians residents, regardless of economic status, are to register with the program. This can happen if new members join and/or the existing members do not leave” (p. 3). Amporfu adds that when revenue mobilization for the program is vertically inequitable, it becomes susceptible to sidelining the poor to remain unregistered for the program. Amporfu advocates for vertical equity if sustainability of the program is the government of Ghana’s priority. Amporfu further asserts that though the premium revenue only forms a smaller proportion of the total revenue to the fund, premium is an important factor in achieving universal coverage, therefore all eligible Ghanaians must be brought on board to contribute toward the success of the NHIP.

In summing up, this study agrees with Blanchet, Fink and Osei-Akoto’s (2012) assertion that the government of Ghana’s intent to increase access to the formal healthcare sector through social health insurance has achieved some partial success. But, there is need for much greater and specific efforts to be initiated by both NHIA and government to ensure that the program attains financial sustainability and equity of coverage for all citizens as spelt out in Act 650.

Recommendations for Future Studies

The principal objective of this study is to find out the principles underlying equity of coverage and financial sustainability of social health insurance; and ascertain whether the Ghanaian regime contains some of these qualities. The study was however besieged with constraints and limitations. The limitations prevented the research to cover diverse areas under

the subject matter. It is therefore in the light these limitations that the following are recommended to be included in future studies.

Firstly, a research of this nature, which requires extensive travels across the country necessitates that sufficient financial resources be sought for or made available for crisscrossing the country to gather the needed data. It is incumbent for future researchers in this subject area to amass enough and needed financial resources to complete a comprehensive task.

To enhance generalizability of the study to the entire Ghanaian population, it requires that sample size be larger enough to facilitate generalizing. Though the sample size of this study is reasonable large, the study was unable to cover the many variables in their proportionate sizes over the vast Ghanaian community, especially residents of rural areas generally considered poor and vulnerable. To facilitate and enhance generalizing study to the entire Ghanaian population, it is recommended that future studies must make it a priority to enlarge the sample size by covering more regions, and by including more rural dwellers in the study. Another major issue neglected by this study is comparing health outcome with the NHIP. Correlating health outcome with the NHIP would have provided avenue for determining an aspect of equitability of the program. Future studies should therefore include health outcome as it relates to the NHIP.

This study was unable to gather data from management and personnel of NHIA though efforts were made to include them in the study. To be fair in generalizing study, it is important that the views of NHIA and its agents are included to have multilevel view of the problem areas. It is necessary that future studies brings onboard views express by NHIA and its personnel to generate the fairest generalizability of the study to the entire Ghanaian population. It is also

recommended that future studies should delve into ascertaining how vertical and horizontal equity affects individuals' willingness to sign up for the NHIP.

Finally, future studies must attempt to include a program evaluation section to the inquiry. The Ghanaian program has run for about a decade, as such will be appropriate to add this section. Program evaluation will facilitate the determination of whether the program is meeting its set objective or not, and what necessary steps if need be, to be taking to ameliorate the situation if the program is not achieving its predetermined goals.

References

- Adolino, Jessica R. and Charles H. Blake. 2011. *Comparing Public Policies: Issues and Choices in Industrialized Countries*. CQ Press
- Adu-Oppong, Ahmed; Lois Kisiwaa-Ameyay and Beatrice Wiafe Addai. 2010. Ghana. In *Comparative Health Systems: Global Perspectives*, eds. Johnson, James A. and Carleen H. Storskopf. Jones and Bartlett. Sudbury, Massachusetts: Jones and Bartlett Publishers
- Agyepong, Irene Akua, and Sam Adjei. 2008. Public Social Policy Development and Implementation: a Case Study of the Ghana National Health Insurance Scheme. *Health Policy and Planning*, 23: 150-160
- Altenstetter, Christa. 2003. Insights from Health Care in Germany. *American Journal of Public Health*, Vol. 93. No. 1
- Amporfufu, Eugenia. 2013. Equity of the Premium of the Ghanaian National Health Insurance Scheme and the Implication for Achieving Universal Coverage. *International Journal for Equity in Health*, 12: 4
- Anane, Richard. "The Current State of NHIS is Very Frightening." www.Myjoyonline.com March 11, 2013.
- Apoya, Patrick and Anna Marriott. 2011. Achieving a Shared Goal: Free Universal Health Care in Ghana. *Oxfam International*, extracted from: <http://www.oxfam.org/en/policy/achieving-shared-goal-ghana-healthcare>.
- Aryeetey, Ernest and Ravi Kanbur. 2005. Ghana's Economy at Half Century: An Overview of Stability, Growth and Poverty. Extracted from:

<http://www.arts.cornell.edu/poverty/kanbur/AryeeteyKanbur.pdf>. 03/01/2014

Asenso-Okyere, Kwadwo W. 1995. Financing Healthcare in Ghana. *World Health Forum*, Vol. 16

Atanasova, Elka et al. 2011. What Have 10 Years of Health Insurance Reforms Brought about in Bulgaria? Re-appraising the Health Insurance Act of 1998. *Health Policy*, 102 (2011) 263 – 269

Australian Red Cross Accord. 2009. Health care in Ghana

http://www.ecoi.net/file_upload/90_1236873017_accord-health-care-in-ghana-20090312.pdf. 07/09/13

Barnighausen, Till and Rainer Sauerborn. 2002. One Hundred and Eighteen Years of the German Health Insurance System: Are there Lessons for Middle and Low-income Countries? *Social Science and Medicine*, 52 (2002) 1559 – 1587

Bartholomew, David J. 1981. *Mathematical Methods in Social Sciences*. A Wiley-Interscience Publication. Chichester, New York.

Barrientos, A., and P. Lloyd Sherlock. 2000. Reforming Health Insurance in Argentina and Chile. *Health Policy and Planning*, 15 (4)

Bauhoff, Sebastian; Davis R. Hotchkiss and Owen Smith. 2011. The Impact of Medical Insurance for the Poor in Georgia: A Regression Discontinuity Approach. *Health Economics*, pp. 1362 – 1378

Beninios Delegation in Ghana to Understudy Health Insurance. Extracted from:

<http://edition.radioxyzonline.com/>, April 12th, 2013

- Berg, Bruce L. 2009. *Qualitative Research Methods for the Social Sciences*. Pearson Education Inc., Boston, MA. 7th Edition
- Berry, William D., and Stanley Feldman. 1985. *Multiple Regression in Practice*. Sage Publications, Beverly Hill, California.
- Bertranou, Fabio M., 1999. Are Market Oriented Health Insurance Reforms Possible in Latin America?: The Case of Argentina, Chile and Colombia. *Health Policy*, Elsevier, vol. 47 (1)
- Bill Gates Impressed with Ghana's Health System: Extracted from <http://www.moh-ghana.org/UserFiles/Ghana%20media%20statement.pdf>. On 05/21/2014
- Black, Thomas R. 1999. *Doing Quantitative Research in the Social Sciences: An Integrated Approach to Research Design, Measurement and Statistics*. Sage Publications, London
- Blanchet, N. J., G. Fink and I. Osei-Akoto. 2012. The Effect of Ghana's National Health Insurance Scheme on Healthcare Utilization. *Ghana Medical Journal*.
- Blank, Robert H. and Viola Burau. 2010. *Comparative Health Policy*. Palgrave Macmillan, Kirby Street, London. 3rd Edition
- Bryman, Alan. 2001. *Social Research Methods*. Oxford University Press Inc., New York
- Carrin, Guy; Inke Mathauer; Ke Xu; and David B. Evans. 2013. Universal Coverage: A Global Consensus. In *Scaling up Affordable Health Insurance: Staying the Course*, eds. Alexander S. Preker, Marianne E. Linder, Dove Chernichovsky, and Onno P. Schellekens. Washington DC: The World Bank

- Cebula, Richard J. 2006. A Further Analysis of Determinants of Health Insurance Coverage. *International Advances in Economic Research*, 12: 382-389
- Chang, W-C. 2002. The Meaning and Goals of Equity in Health. *Epidemiol Community Health*. # 56: 488-491
- Cheng, Tsung-Mei. 2003. Taiwan's New National Health Insurance Program: Genesis, and Experience so Far. *Health Affairs*, Vol. 22 #3
- Chankova, Slavea; Chris Atim and Laurel Hatt. 2010. Ghana's National Insurance Health Scheme. In *The Impact of Health Insurance in Low- and Middle-Income Countries*, eds. Maria-Luisa Escobar, Charles Griffin and R. Paul Shaw. Washington DC: Brookings Institution Press
- Churchill, Gilbert A., Jr. 1995. *Marketing Research Methodological Foundation*. The Dryden Press Harcourt Brace College Publisher, Orlando, Florida. 6th Edition
- Creswell, John W. 2003. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 2nd Edition, Sage Publication, Thousand Oaks, California
- Cuevas, Facundo and Susan W. Parker. 2010. The Impact of Health Insurance on Use, Spending, and Health in Indonesia. In *The Impact of Health Insurance in Low- and Middle-Income Countries*, eds. Maria-Luisa Escobar, Charles Griffin and R. Paul Shaw. Washington DC: Brookings Institution Press
- Dinan, Michaela A; Leigh Ann Simmons, and Ralph Snyderman. 2010. Personalized Health Planning and the Patient Protection and Affordable Care Act: An Opportunity for

- Academic Medicine to Lead Health Care Reform. 2010. *Academic Medicine*, Vol. 85, No 11
- Duncan, Colin. 1998. The Elusive Nature of NHS Crises. *The Political Quarterly Publishing Co. Ltd*
- Ekman, B., N. T. Liem, H. A. Duc and H. Axelson. 2008. Health Insurance Reforms in Vietnam: A Review of Recent Development and Future Challenges. *Health Policy and Planning* 23 (4): 252-63
- Ghana Health Profile 2012. <http://globserver.cn/en/ghana/health>. Extracted on 07/08/2013
- Ghana's 2010 Population and Housing Census. 2012. Ghana Statistical Service
http://gbcghana.com/election_stuff/Census%202012%20final.pdf. Extracted on 07/05/13.
- Giedion et al. 2010. Colombia's Big Bang Health Insurance Reform. In *The Impact of Health Insurance in Low- and Middle-Income Countries*, eds. Maria-Luisa Escobar, Charles Griffin and R. Paul Shaw. Washington DC: Brookings Institution Press
- Gobah, Freeman F. K. and Zhang Liang. 2011. The National Insurance Scheme in Ghana: Prospects and Challenges: a Cross-sectional Evidence. *Global Journal of Health*, Vol. 3, No. 2; October 2011
- Grosov, S. Miriam and Hyman Sardy. 1985. *A Research Primer for the Social and Behavioral Sciences*. Academic Press, Inc. Orlando, Florida
- Gujarati, Damodar. 2003. *Basic Econometrics*, 4th Edition. McGraw Hill, New York

- Han, Whiejong M. 2010. Korea. In *Comparative Health Systems: Global Perspectives*, eds. Johnson, James A. and Carleen H. Storskopf. Sudbury, Massachusetts: Jones and Bartlett Publishers
- Hanke, Bob. 2009. *Intelligent Research Design: a Guide for Beginning Researchers in the Social Sciences*. Oxford University Press Inc., New York
- Harrington, Scott E. 2010. U. S. Health-Care Reform: The Patient Protection and Affordable Care Act. *The Journal of Risk and Insurance*, Vol. 77, No 3, 703 – 708
- Hokoyama, Mikiyasu. 2010. Japan. In *Comparative Health Systems: Global Perspectives*, eds. Johnson, James A. and Carleen H. Storskopf. Sudbury, Massachusetts: Jones and Bartlett Publishers
- Hong, Rathavuth; Mohamed Ayad and Fidele Ngabo. 2011. Being Insured Improves Safe Delivery Practices in Rwanda. *Journal of Community Health*, 36: 779-784
- Ibrahimipour et al. 2011. A Qualitative Study of the Difficulties in Reaching Sustainable Health Universal Health Insurance Coverage in Iran. *Health Policy and Planning*, 26: 485 – 495
- Jehu-Appiah, Caroline et al. 2010. Efficiency, Equity and Feasibility of Strategies to Identify the Poor: An Application to Premium Exemptions under National Health Insurance in Ghana. *Health Policy*, 95, pp. 166-173
- Jehu-Appiah, Caroline et al. 2011. Equity Aspect of the National Health Insurance Scheme in Ghana: Who is enrolling, who is not and Why? *Social Science Medicine*, 72, 157 - 165
- Jones, A. Russell. 1996. *Research Methods in the Social and Behavioral Sciences*. Sinauer Associates, Inc., Publishers, Sunderland, Massachusetts

- Jost, Timothy. 1998. German Health Care Reform: The Next Steps. *Journal of Health Politics, Policy and Law*, Vol. 23, No. 4
- Jreisat, Jamil E. 2002. *Comparative Public Administration and Policy*. Westview Press, Boulder, Colorado
- King, Gary; Robert Keohane O., and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton University Press, Princeton, New Jersey
- Kirigia, Joses M. et al. 2005. Determinants of Health Insurance Ownership among South African Women. *BMC Health Services Research*, 5: 17
- Kupor, Scott A.; Yong-chuan Liu; Jungwoo Lee and Aki Yoshikawa. 1995. The Effect of Copayment and Income on the Utilization of Medical Care by Subscribers to Japan's National Health Insurance System. *International Journal of Health Services*, Vol. 25, No. 2, 295-312
- Kuriyama, Shinichi et al. 2004. Joint Impact of Health Risk on Health Care Charges: 7-year Follow-up of National Health Insurance Beneficiaries in Japan (the Ohsaki Study). *Preventive Medicine*, 39 1194-1199
- Latry, Philippe; Mathieu Molimard; Bernard Begaud, and Karin Martin-Latry. 2010. How Reimbursement Databases can be used to Support Drug Utilization Studies: Example using the main French National Health Insurance System Database. *European Journal of Clinical Pharmacology*, 66: 743-748
- Lee et al., 2010. The Impact of Universal Health Insurance on Population Health: The Experience of Taiwan. *Health Services Research*; 10: 225.

- Lee, Jong-Chan. 2003. Health Care Reform in South Korea: Success or Failure? *American Journal of Public Health*, Vol. 93 No. 1
- Liao, Tim Futing. 1994. *Interpreting Probability Models: Logit, Probit, and other Generalized Linear Models*. Sage Publication, Thousand Oaks, London
- Light, Donald W. 2003. Universal Health Care: Lessons from the British Experience. *American Journal of Public Health*, Vol. 93 No. 1
- Lim, Timothy C. 2009. *Doing Comparative Politics: An Introduction to Approaches and Issues*. Lynne Rienner Publishers, Boulder London
- Lineaweaver, Williams and MS Brandon. 2012. Life, Liberty, the Pursuit of Happiness, and the Patient Protection and Affordable Care Act. *Journal of American College of Surgeons*, Vol. 215, No. 6
- Liu, Xiaoyun et al. 2012. Can Rural Insurance Improve Equity in Health care Utilization? A Comparison between China and Vietnam. *International Journal for Equity in Health* 11: 10
- Lu, Chunling et al. 2012. Toward Universal Health Coverage: An Evaluation of Rwanda *Mutuelles* in Its First Eight Years. Extracted from <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0039282>. On 09/04/2013
- Makaka, Andrew; Sarah Breen and Agnes Binagwaho. 2012. Rwanda Innovates to Sustain Universal Healthcare Coverage. Extracted from <http://www.issa.int/News-Events/News2/Rwanda-innovates-to-sustain-universal-health-care-coverage>. On 09/04/2013

- Manchikanti, Laxmaiah et al. 2011. Patient Protection and Affordable Care Act of 2010: Reforming the Health Care Reform for the New Decade. *Health Policy Review*, 14: E35 – E67
- Manheim, B. Jarol; Richard C. Rich; Lars Willnat, and Craig L. Brians. 2006. *Empirical Political Analysis: Research Methods in Political Science*. Pearson Educational Inc. New York, 6th Edition
- Map of Ghana, curled from http://www.nationsonline.org/oneworld/map/ghana_map.htm, on 01/23/14
- McIntyre, Diane et al. 2008. Beyond Fragmentation and Toward Universal Coverage: Insights from Ghana, South Africa and the United Republic of Tanzania. *Bulletin of World Health Organization* 86 (11)
- Moy, Beverly et al. 2011. American Society of Clinical Oncology Policy Statement: Opportunities in the Patient Protection and Affordable Care Act to Reduce Cancer Care Disparities. *Journal of Clinical Oncology*, Vol. 29 #28
- Nakatsuka et al. 1991. Different Rates of Acceptance of Health Examination among the People Under Two Separate Health Insurance Programs in Japan. *Tohoku Journal of Experimental Medicine*, 163, 59-71
- National Health Insurance Authority, 2010 Annual Report
- National Health Insurance Scheme Strategic Plan, 2010-2014
- Nigerian Delegation in Ghana to Understudy the National Health Insurance Scheme, Extracted from: www.myjoyonline.com, on June 11th, 2013

- Nguyen Ha and James Knowles. 2010. Demand for Voluntary Health Insurance in Developing Countries: The case of Vietnam's School-age Children and Adolescent Student Health Insurance Program. *Social Science and Medicine*, Vol. 21.
- Ofori-Birikorang, Andrews. 2009. Promoting a New Health Policy in the Ghanaian Media: Newspaper Framing of the National Health Insurance Scheme from 2005-2007. PhD diss., Ohio University.
- Ogawa, Sumiko; Toshihiko Hasegawa; Guy Carrin and Kei Kawabata. 2003. Scaling up Community Health Insurance: Japan's Experience with the 19th Century Jyorei Scheme. *Health Policy and Planning*, 18(3): 270-278
- Orem, Juliet Nabyonga, and Charlotte Muheki Zikusooka. 2010. Health Financing Reform in Uganda: How equitable is the Proposed National Health Insurance Scheme? *International Journal for Equity in Health* 9: 23
- Pampel, Fred C. 2000. *Logistic Regression: A Primer*. Sage Publications, Thousand Oaks, California
- Pannarunothai, Supasit; Direk Patmasiriwat and Samrit Srithamrongsawat. 2004. Universal Health Coverage in Thailand: Ideas for Reform and Policy Struggling. *Health Policy*, 68 (2004) 17 – 30
- Patton, Michael Quinn. 1990. *Qualitative Evaluation and Research Methods*. Sage Publications, Newbury Park, California. 2nd Edition.
- Perlman, Francesca; Dina Balabanova and Martin McKee. 2009. An Analysis of Trends and Determinants of Health Insurance and Healthcare Utilization in the Russian Population

- between 2000 and 2004: the “Inverse Care Law” in Action. *Health Services Research*, 9: 68
- Przeworski, Adam and Henry Tuene. 1970. *The Logic of Comparative Research and Social Science theory*.
- Robyn, Paul Jacob; Rainer Sauerborn; and Till Barnighausen. 2012. Provider Payment in Community-based Health Insurance Scheme in Developing Countries: a Systematic Review. *Health Policy and Planning*, 1 - 12
- Rodwin, Victor G. 2003. The Healthcare System under French National Health Insurance: Lessons for Health Reform in the United States. *American Journal of Public Health*, Vol. 93, No. 1
- Roy, Kakoli and David Hill Howard. 2007. Equity in Out-of-pocket for Hospital Care: Evidence from India. *Health Policy* 80 (2007) 297 – 307
- Ruiz F., L Amaya and S Venegas. 2007. Progressive Segmented Health Insurance: Colombian Health Reform and Access to Health Services. *Health Economic*, 16 (1): 3-18
- Saksena, Priyanka et al. 2011. Mutual Health Insurance in Rwanda: Evidence on Access to Care and Financial Risk Protection. *Health Policy*, 99 (2011) 203-209
- Shapiro, Jonathan. 2010. The NHS: the Story so Far (1948 – 2010). *Clinical Medicine*, Vol. 10 No. 3
- Sarpong N. et al. 2009. National Health Insurance Coverage and Socioeconomic Status in a Rural District of Ghana. *Tropical Medicine and International Health*, vol. 15 # 2 pp. 191-197

- Scheil-Adlung, Xenia. 2013. Health Protection: More than Financial Protection. In *Scaling up Affordable Health Insurance: Staying the Course*, eds. Alexander S. Preker, Marianne E. Linder, Dove Chernichovsky, and Onno P. Schellekens. Washington DC: The World Bank
- Schneider, Pia and Kara Hanson. 2006. Horizontal Equity in Utilization of Care and Fairness of Health Financing: A Comparison of Micro-Health Insurance and User Fees in Rwanda. *Health Economics*, 15: 19-31
- Schneider, Pia and Kara Hanson. 2007. The Impact of Micro Health Insurance on Rwandan Health Center Costs. *Health Policy and Planning*, 22: 40-48
- Schoen, Cathy; Michelle M. Doty; Ruth H. Robertson and Sara R. Collins. 2011. Affordable Care Act Reforms Could Reduce the Number of Underinsured US Adults by 70 Percent. *Health Affairs* 30, No 9: 1762 – 1771
- Schroeder, Larry D; David L. Sjoquist and Paula E. Stephan. 1989. *Understanding Regression Analysis: An Introductory Guide*. Sage Publication, Newbury Park
- Schut, Fredrick T., and Bernard van den Berg. 2010. Sustainability of Comprehensive Long-term Care Insurance in the Netherlands. *Social Policy and Administration*, ISSN 0144 – 5596
- Schutt, Russell K. 2009. *Investigating the Social World: The Process and Practice of Research*. Pine Forge Press, Los Angeles
- Sidorenko, Alexandra A. and James R. G. Butler. 2007. Financing Health Insurance in Asia Pacific Countries. *Asian-Pacific Economic Literature*, doi: 10. 1111/j. 1467 – 8411.

- Sobel, Michael E. 1995. Causal Inference in the Social and Behavioral Science. In *Handbook of Statistical Modeling for the Social and Behavioral Science*. Eds. Gerhard Arminger, Clifford C. Clogg and Michael E. Sobel. New York: Plenum Press
- Son, A. H. K. 1998. The Construction of the Medical Insurance System in the Republic of Korea, 1963 – 1989. *Scandinavian Journal of Social Welfare*, 0907 – 2055
- Syrett, Keith. 2010. Mixing Private and Public Treatment in the UK's National Health Service: A Challenge to Core Constitutional Principles? *European Journal of Health Law* 17 235-255
- Tabachnick, Barbara G., and Linda S. Fidell. 2007. *Using Multivariate Statistics*. Pearson Education, Inc., Allyn and Bacon. 5th Edition
- US Dollar Daily Forex Interbank Rates. Extracted from:
http://www.bog.gov.gh/index.php?option=com_wrapper&view=wrapper&Itemid=298,
on the 02/23/2014
- US Dollar Exchange Rate:
<http://search.worldbank.org/data?qterm=exchange%20rates&language=EN>.
Extracted on the 02/23/2014
- Welch, Susan and John Comer. 1983. *Quantitative Methods for Public Administration: Techniques and Application*. Harcourt Brace & Company, Orlando Florida. 2nd Edition
- Wen, Chi Pang, Shan Pou Tsai and Wen-Shen Isabella Chung. 2008. A 10-Year Experience with Universal Health Insurance in Taiwan: Measuring Changes in Health and Health Disparity. *Annals of Internal Medicine*, Vol. 148, #4

- Witter, Sophie and Bertha Garshong. 2009. Something Old or Something New? Social Health Insurance in Ghana. *International Health and Human Rights* 9: 20
- Wong, Chack-Kie; Kwong-Leung Tang and Vai lo Lu. 2006. Unaffordable Healthcare amid Phenomenal Growth: The Case of Healthcare Protection in Reform China. *International Journal of Social welfare* 1366
- World Health Statistics 2013.
http://www.who.int/gho/publications/world_health_statistics/EN_WHS2013_Full.pdf
[05/21/2014](http://www.who.int/gho/publications/world_health_statistics/EN_WHS2013_Full.pdf)
- Yang, Bong-Min. 1996. The Role of Health Insurance in the Growth of the Private Health Sector in Korea. *International Journal of Health Planning and Management*, Vol. 11, 231-252
- Yip, Winnie and Peter Berman. 2001. Targeted Health Insurance in a Low Income Country and Its Impact on Access and Equity in Access: Egypt's School Health Insurance. *Health Economic* 10: 207 – 220
- Yu, Ping Chai, Whynes K. David, and Sach H Tracy. 2008. Equity in Health Care Financing: The Case of Malaysia. *International Journal for Equity in Health* 7: 15
- Yu, Ping Chai, Whynes K. David, and Sach H Tracy. 2011. Reform toward National Health Insurance in Malaysia: The Equity Implications. *Health Policy*

Appendix I

Please Check (tick) all that applies to you.

1. Gender

- Male
- Female

2. Age

- 21 - 30
- 31 – 40
- 41 – 50
- 51 – 60
- 61 and above

3. Marital Status

- Married
- Single/divorced/separated/widowed

4. Educational level

- No formal education or zero years of schooling
- Primary school/ Junior high school
- Senior high school
- Vocational school
- University
- Post graduate level

5. Residential status

- Rural
- Urban

6. Religion

- Christian
- Muslim
- Traditional African Religion
- Other.....

7. What is the total number of people in your household? Please state or select category that applies to you

- 1 - 2
- 3 - 5
- 6 and above

8. Type of occupation

- Self-employed
- Employed
- Unemployed
- On retirement

9. If employed, what type of employment? Please state

10. How much income do you make in a month? Please state or select category that applies to you

- C 0 - C200
- C201 - C500
- C501 - C1000
- C1001 - C2000
- C2001 and above

11. On the scale of 1 to 5, do you consider yourself or any member of your household healthy?

- 1 not very healthy
- 2 not healthy
- 3 neutral
- 4 healthy
- 5 very healthy
- Other, specify.....

12. Have you heard of the Ghana National Health Insurance program?

- Yes
- No

13. Do you have a health insurance?

- Yes
- No

14. If yes to # 13, when did you register/join the health insurance program? Please provide month and year.....

15. Is any member of your household registered under any health insurance program?

- Yes
- No

16. If yes to #15, what is the relationship between you and the registered person?

- Spouse
- Father
- Mother
- Other, specify.....

17. Are you covered under any member of your household's health insurance program?

- Yes
- No

18. If no to #13 and #17, why are you not registered for a health insurance program?
- Office is too remote (far)
 - Cannot afford the premium
 - I do not need a health insurance
 - Process is difficult
 - Other
19. When was the last time you sought healthcare services? Please provide month and year.....
20. Was it
- orthodox medicine
 - Traditional/herbal medicine
 - Self-medication
 - Did not seek health services and did not have self-medication
21. On a scale of 1 to 5, what is your impression of the type of services sought under # 21? (If you have health insurance, answer and skip #25).
- 1 very bad
 - 2 Bad
 - 3 Neutral
 - 4 Good
 - 5 Very good
 - Other, specify.....
22. Were you denied services because you have no health insurance policy?
- Yes
 - No
23. If no to # 22, how did you or members of your household finance your healthcare needs?
- Out-of-pocket
 - Other.....
24. What proportion of your income goes to pay for healthcare services if you are not registered?
- 0% - 20%
 - 21% - 40%
 - 41% - 60%
 - 61% - 80 %
 - 81% and above
25. When did you receive your membership card? Please provide month and year.....
26. What motivated you to register for health insurance? Please state briefly
-

27. What type of insurance coverage do you have?
- Private
 - Public
 - Community based
 - Other, please state.....
28. How many people are covered under your health insurance program? Please state or select category that applies to you
- 1- 2
 - 3 - 5
 - 6 and above
29. How often do you or any member of your household seek healthcare services from providers within a month? State or select below..... (If not registered please answer and skip to # 32)
- Less than 5 times in a year
 - Up to ten times in a year
 - Greater than ten times a year
30. Does your insurance policy pay/cover for all services you receive from providers?
- Yes
 - No
31. If no to # 30, do you spend out-of-pocket money for medical services though you have health insurance?
- Yes
 - No
32. On the scale of 1 to 5, what is the average cost of services you pay from out-of-pocket?
- 1 Very low
 - 2 Low
 - 3 Neutral
 - 4 High
 - 5 Very high
 - Other.....
33. Have you or any member of your household sought medical services in the last two months?
- Yes
 - No
34. If yes # 33, were you admitted?
- Yes
 - No
35. If yes to # 34, how long was the admission? Please state or select category that applies to you
- Under 1 week
 - Between 1 and 2 weeks
 - Above 2 weeks

36. On the scale of 1 to 5, how much did you or any member of your household pay out-of-pocket toward admission to a health facility? Please state or select category that applies to you

- 1 Very low
- 2 Low
- 3 Neutral
- 4 High
- 5 Very high
- Other, specify.....

37. What proportion of your income goes into paying premiums and out-of-pocket payments for healthcare services?

- 0% – 20%
- 21% - 40%
- 41% - 60%
- 61% - 80%
- 81% and above

38. Does your health insurance provider fulfill its obligation by making payments within reasonable time periods to health providers for services rendered to you and members of your household?

- Yes
- No
- Don't know

39. If no to # 38, do health providers refuse to offer you and members of your household services any time you call into a health facility?

- Yes
- No

40. Have you ever been asked to pay for medical services rendered to you because your health insurance does not cover such services?

- Yes
- No

41. Do you think the National Health Insurance Policy/Program is or will be self-sustaining?

- Yes
- No
- Don't know

42. Provide reasons for # 41 above.

.....

.....

.....

43. What do you want to see changed or made different in the existing health insurance policy?
Please specify.....
.....
.....

44. On the scale of 1 to 5, what is your impression of the national health insurance scheme?
- 1 Very bad
 - 2 Bad
 - 3 Neutral
 - 4 Good
 - 5 Very good
 - Other, please specify.....

45. On the scale of 1 to 5, what are other people's impressions of the national health insurance program?
- 1 Very bad
 - 2 Bad
 - 3 Neutral
 - 4 Good
 - 5 Very good
 - Other, please specify.....

Appendix II

Interview administered to Healthcare providers' administrators

1. What is the accounting procedure involved in submitting returns for claims
2. How often do you submit returns to NHIA
3. Do you receive payment from NHIA within acceptable time periods?
4. If no to # 3, does that affect your operations? Explain.
5. Does NHIA communicate to you why it cannot make payment timely?
6. Do you deal with other insurance programs apart from NHIA
7. If yes to # 6, do they make timely payments?
8. If no # 7, what reasons do they offer?
9. What in your view point enhances a common ground with the implementing agency?
10. What in your view point polarizes the NHIP?
11. What is your personal assessment of the NHIP or any other insurance programs you deal with
12. What do you want to see changed in the policy? Explain.
13. What is the annual budget of running the program or healthcare services?
14. Is the budget accounted for within the stipulated and acceptable time period?
15. What is the portion of the NHIP budget that caters for other commitments apart from the portion that directly goes to finance payments services provided holders of the policy
16. Does the comprehensive instead of incremental rolling of the program affect the operation of the entire system? Explain

Appendix III

Interview questions to be administered to program [NHIA] administrators

1. What is the annual budget of healthcare providers within your jurisdiction?
2. How do you make up or account for the budget?
3. What are the sources of your budget?
4. What is the accounting procedure involved in reimbursing providers?
5. How often do you remit providers upon receipt of demand to pay for services rendered?
6. Do you make payments within acceptable time limits as agreed with providers?
7. What is the scope of coverage for beneficiaries?
8. Are all citizens covered under the dispensation?
9. What polarizes you as the implementing agency with healthcare providers?
10. What in your view point enhances a common ground with healthcare providers?
11. What is your personal assessment of the NHIP? Explain
12. What do you want to see changed in the policy? Explain
13. What is the proportion of the NHIP budget that caters for other commitment apart from the portion that directly goes to finance payments of services provided beneficiaries of the policy?
14. Does the comprehensive instead of the incremental rolling out of the program affect the operation of the entire system? Explain

Appendix IV: Summary of Variables, Registered and Nonregistered NHIP Members

| Registered? (n = 405) | | | | | | |
|-----------------------|--------------|-------------------|--------------|-------------------|-----|-------------|
| | | Yes | | No | | Grand Total |
| Region | Total | Percentage | Total | Percentage | | |
| Upper East | 71 | 80.68 | 17 | 19.31 | 88 | |
| Ashanti | 76 | 80.51 | 18 | 19.14 | 94 | |
| Greater Accra | 98 | 74.24 | 34 | 25.75 | 132 | |
| Bono Ahafo | 82 | 90.11 | 9 | 9.89 | 91 | |
| Gender | | | | | | |
| Male | 205 | 79.15 | 54 | 20.85 | 259 | |
| Female | 122 | 83.56 | 24 | 16.44 | 146 | |
| Age | | | | | | |
| 21-30 | 186 | 79.15 | 49 | 20.85 | 235 | |
| 31-40 | 90 | 86.54 | 14 | 13.46 | 104 | |
| 41-50 | 35 | 77.78 | 10 | 22.22 | 45 | |
| 51-60 | 11 | 78.57 | 3 | 21.43 | 14 | |
| 60+ | 5 | 71.43 | 2 | 28.57 | 7 | |
| Marital Status | | | | | | |
| Married | 151 | 85.31 | 26 | 14.69 | 177 | |
| Single/Divorce/ | | | | | | |
| Separate | 176 | 77.19 | 52 | 22.81 | 228 | |

Education

| | | | | | |
|---------------------|----|-------|----|-------|-----|
| No Education | 17 | 58.62 | 12 | 41.38 | 29 |
| Primary/Junior | 27 | 62.79 | 16 | 37.21 | 43 |
| Senior High | 66 | 80.49 | 16 | 19.51 | 82 |
| Vocational | 29 | 90.63 | 3 | 9.36 | 32 |
| University Student | 94 | 85.45 | 16 | 14.55 | 110 |
| University Graduate | 70 | 84.34 | 13 | 15.66 | 83 |
| Post Graduate | 24 | 92.31 | 2 | 7.69 | 26 |

Residential Status

| | | | | | |
|-------|-----|-------|----|-------|-----|
| Rural | 97 | 83.62 | 19 | 16.38 | 116 |
| Urban | 230 | 79.58 | 59 | 20.42 | 289 |

Total in Household

| | | | | | |
|-----|-----|-------|----|-------|-----|
| 1-2 | 28 | 82.35 | 6 | 17.65 | 34 |
| 3-5 | 113 | 81.39 | 26 | 18.71 | 139 |
| 6+ | 186 | 80.17 | 46 | 19.83 | 232 |

Occupation

Government

| | | | | | |
|----------------|-----|-------|----|-------|-----|
| Worker | 164 | 88.65 | 21 | 11.35 | 185 |
| Work in | | | | | |
| Private sector | 21 | 72.41 | 8 | 27.59 | 29 |
| Self Employed | 26 | 63.41 | 15 | 36.59 | 41 |

| | | | | | |
|------------|----|-------|----|-------|-----|
| Farmer | 14 | 77.78 | 4 | 22.22 | 18 |
| Unemployed | 21 | 70.00 | 9 | 30.00 | 30 |
| Student | 81 | 79.41 | 21 | 20.59 | 102 |

Income (Cedis (¢) Per Month)

| | | | | | |
|------------|-----|-------|----|-------|-----|
| ¢0-200 | 128 | 77.11 | 38 | 22.89 | 166 |
| ¢201-500 | 68 | 73.91 | 24 | 26.09 | 92 |
| ¢501-1000 | 97 | 92.38 | 8 | 7.62 | 105 |
| ¢1001-2000 | 27 | 81.82 | 6 | 18.18 | 33 |
| ¢2000+ | 7 | 77.78 | 2 | 22.22 | 9 |

Health Status

| | | | | | |
|------------------|-----|-------|----|-------|-----|
| Not Very Healthy | 31 | 88.57 | 4 | 11.43 | 35 |
| Not healthy | 31 | 77.50 | 9 | 25.50 | 40 |
| Neutral | 64 | 71.91 | 25 | 28.09 | 89 |
| Healthy | 113 | 84.96 | 20 | 15.04 | 133 |
| Very health | 88 | 81.48 | 20 | 18.52 | 108 |

Coverage Type

| | Number | Percent |
|-----------------|--------|---------|
| Private | 30 | 9.17 |
| Public | 293 | 89.60 |
| Community Based | 4 | 1.22 |

Does Your Health Insurance Cover all Services?

| | | |
|--------------|-----|------|
| No | 289 | 71.4 |
| Yes | 37 | 9.1 |
| No Insurance | 71 | 17.5 |
| No Response | 8 | 2.0 |

Percentage of Income paid on Premium

| Percent Income | Number | Percent |
|----------------|--------|---------|
| 0 – 20 | 202 | 49.9 |
| 21 – 40 | 90 | 22.2 |
| 41 – 60 | 24 | 5.9 |
| 61 – 80 | 8 | 2.0 |
| 81+ | 5 | 1.2 |
| Not enrolled | 76 | 18.8 |

Is the NHIP Sustainable?

| | | |
|---------|-----|------|
| Yes | 159 | 39.3 |
| No | 104 | 25.7 |
| Neutral | 141 | 34.8 |
| Missing | 1 | .2 |

Perception/Impression of the NHIP

| | | |
|-----------|-----|------|
| Very Bad | 20 | 4.9 |
| Bad | 44 | 10.9 |
| Neutral | 89 | 22.0 |
| Good | 203 | 50.1 |
| Very Good | 49 | 12.1 |

Appendix V:

From Figure 2b Conversion of Claims Payment to providers from Cedi to Dollar

| Year | Cedi (C) Amount (Million) | Exchange Rate Per Dollar | Total (\$) (Millions) |
|------|------------------------------|-----------------------------|--------------------------|
| 2005 | 7.6 | 0.91 | 6.92 |
| 2006 | 35.48 | 0.92 | 32.64 |
| 2007 | 79.62 | 0.94 | 74.84 |
| 2008 | 198.11 | 1.06 | 186.90 |
| 2009 | 322.91 | 1.41 | 229.01 |
| 2010 | 394.27 | 1.43 | 275.71 |

Table 3: Cedi Equivalent 2010 Income/Expenditure (Millions C)

Income

| | |
|----------|--------|
| NHI Levy | 314.84 |
| SSNIT | 87.01 |
| Premiums | 21.07 |
| Interest | 58.65 |
| Others | 0.28 |

| | |
|-------|--------|
| Total | 481.85 |
|-------|--------|

Expenditure

| | |
|-----------|--------|
| Claims | 394.27 |
| Logistics | 11.26 |

| | | |
|----------------------|-------|---------------|
| MOH Support | 64.99 | |
| Operational Expenses | 15.87 | |
| ICT | 23.19 | |
| Property | 8.05 | |
| <hr/> | | |
| Total | | 517.63 |
| | | (-35.78) |

Exchange rate for November 2013 is GhC2.082 to \$1.00 (Bank of Ghana)