SPATIAL DIMENSIONS OF HEALTH INEQUITIES IN A DECENTRALISED SYSTEM: EVIDENCE FROM GHANA

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DECLARATION

I hereby declare that this thesis is a product of my own research and that not even part of it has been submitted elsewhere for any degree. All references have been duly acknowledged.

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DEDICATION

To my Zaffery for his selfless love, always freely and unconditionally given.

ACKNOWLEDGEMENT

ACRONYMS & ABBREVIATIONS

AFRC Armed Forces Revolutionary Council

CCHS Canadian Community Health Survey

CHPS Community-based Health Planning and Services

CI Concentration index

CPP Convention People's Party

CWIQ Core Welfare Indicators Questionnaire

DA District Assembly

DACF District Assembly's Common Fund

DCE District Chief Executive

DDF District Development Fund

DFID Department for International Development

DHA District Health Administration

DHS Demographic and Health Survey

ERP Economic Recovery Programme

FOCJ Functional Overlapping and Competing Jurisdiction

GDHS Ghana Demographic and Health Survey

GDP Gross domestic product

GHS Ghana Health Service

GH₵ Ghana Cedi

GLSS Ghana Living Standards Survey

GNI   Gross national income

GoG   Government of Ghana

GSS   Ghana Statistical Service

HDI   Human Development Index

HDRO   Human Development Report Office

HIV/AIDS   Human   immunodeficiency   virus   infection/Acquired
immunodeficiency syndrome

HPI   Human Poverty Index

IGF   Internally generated funds

IGR   Internally generated revenues

IMF   International Monetary Fund

LSMS Living Standards Measurement Surveys

MCC   Millennium Challenge Corporation

MDGs Millennium Development Goals

MMDA Ministries Departments and Agencies

MoH   Ministry of Health

MP   Member of Parliament

NDAP National Decentralisation Action Plan

NDC   National Democratic Congress

NDPC National Development Planning Commission

NLC   National Liberation Council

NPP New Patriotic Party

NRC   National Redemption Council

PDC People's Defence Committees

PNDC Provisional National Defence Council

PNP   Peoples' National Party

RCC Regional Co-ordinating Council

RHA   Regional Health Administration

SAP   Structural Adjustment Programme

UC   Unit Committee

UNDESA United Nations Department of Economic and Social Affairs

UNDP United Nations Development Programme

UNESCO   United Nations Educational, Scientific and Cultural Organisation

UNSD United Nations Statistics Division

USD   United States Dollars

WHO World Health Organisation

ABSTRACT

Decentralisation has been considered by many as one of the most important strategies in public sector reform in several of the developing countries. Both donors and governments have regarded decentralisation as a tool for national development through the realisation of the objectives of enhancing popular participation in development and the management of development at the regional or local level. Countries are expected to reap the benefits of decentralisation through improved service delivery, namely, through bringing service delivery closer to the consumers, improving the responsiveness of the central government to public demands and, thereby, reducing poverty and inequalities, improving the efficiency and quality of the public services and empowering lower levels of government to feel more involved and in control.

However, decentralisation also has the potential to widen the gap in fiscal resources at the sub-national level and this may, in turn, result in inequities in service delivery to citizens of the same country and depending on where they live. Over the years Ghana has experimented with a mix of decentralisation reforms with the current policy integrating elements of political, administrative and economic decentralisation. The current system of local government in Ghana is based on a decentralisation programme that was launched in 1988 with the introduction of district assemblies (DAs) by the Provisional National Defence Council (PNDC) government. Nevertheless, years after the launch of the decentralisation process there are still significant disparities and inequities between districts and regions in Ghana as regards health variables.

This study set out to investigate the link between decentralisation and health inequities by exploring the spatial dimensions of health equities in Ghana. The thesis used a concurrent mixed method approach by combining a quantitative inequality indices analysis and a qualitative analysis of interviews with policy makers in both the health sector and the decentralised system. The analysis used

household level data from the Ghana Demographic and Health Survey 2003 and 2008 to construct inequality curves and indices in order to illustrate the existing inequities across and within regions in Ghana after an increase in the intensity of decentralisation. The study then decomposed the indices to determine the extent to which these inequities were accounted for by variations both within the regions and between the regions. The thesis also used available data from the common fund records of district assemblies to assess the level of inequities in selected health resources across districts. The thesis then investigated the micro-foundations of health decentralisation using the qualitative and quantitative descriptive analyses.

The analysis conducted revealed that inequities in maternal health utilisation decreased between 2003 and 2008 – the two data points used based on the research design. However, these inequities were attributed primarily to within region inequities as the level of between regions inequities was significantly lower for both the concentration index and the Theil's index. However, although, at the regional level the general trend revealed that inequities had also decreased between 2003 and 2008, some individual regions had recorded increases. The concentration index, which provided information on the gradient of the inequities, revealed that the health inequities in Ghana – the total health inequities and also for both years between and within regions – were pro rich. In the instances of the regional inequities these inequities generally manifested a pro rich nature, with the exception of the Upper East region which had showed pro poor inequities in 2008. The analysis of the district level inequities in selected health resources and as regards health facilities, doctors and nurses indicated that the distribution of these facilities favoured the richer districts as the inequities revealed a pro rich gradient. The inequities in the health facilities at the district level were highest in respect of the nurses, followed by doctors and health facilities with scores of 0.32, 0.29 and 0.084 respectively.

The analysis of the qualitative data corroborated the results of the quantitative analysis as it emerged that policy makers at all levels believed that, over the years since the decentralisation, inequities had reduced, albeit marginally. The policy

makers highlighted the high levels of the inequities in health resources, especially human resources, as a major area of concern. However, they also raised major concerns regarding inequities within regions, arguing that a number of factors, including the nature of the decentralisation regime in Ghana, the variations in the economic strength of districts and certain political factors, continued to cause inequities within the decentralised system. They argued that these factors impacted on the ability of both districts and regions to address inequities at a local level. In addition, they also pointed to the need to re-examine the definition of inequities in the Ghana health sector, inequities which result from focusing the attention on a number of regions and areas to the detriment of others.

Keywords: Inequity, decentralisation, concentration curves, concentration index, Theil's Index, Ghana, districts, health care, public sector reforms, inequality
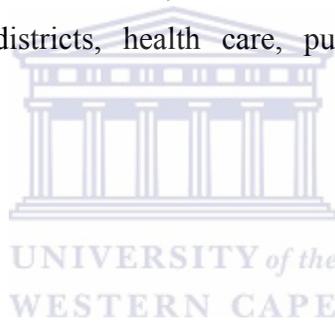
Chapter 1

Introduction

1.1   Introduction

Decentralisation is considered by many as one of the most important strategies in the public sector reform agenda (Altman 2000; Smith 1997, p.1; Cerniglia 2003). The reason for this viewpoint is the fact that both donors and governments in sub-Saharan Africa have regarded decentralisation as a tool for national development through the realisation of the objectives of enhancing popular participation in local development, managing development at the regional or local level and promoting equity and national unity (Hoffman & Metzroth 2010). Decentralisation is expected to bring service delivery closer to the consumers, improve the responsiveness of the central government to public demands, thereby reducing poverty, improve the efficiency and quality of the public services and empower the lower levels of the governance structure to feel more involved and in control of their communities and localities development (Government of Ghana 1993; Ministry of Local Government 2010; Crook 1994, p.334).

Ghana introduced decentralisation with a view to promoting grassroots participation, democracy and development and accelerating poverty reduction by moving the social services nearer to the people (Ayee 2000; Ayee 2002; Crook 1994). Decentralisation in Ghana dates back to the colonial era when the local governments which were set up comprised chiefs and traditional leaders (family heads and kings). These local governments represented a form of fiscal and administrative decentralisation. The colonial authorities mandated the chiefs to collect specific fines and taxes. The system was primarily for administrative and control purposes and involved, inter alia, the Municipal Ordinance of 1859 which resulted in the creation of just a few municipalities in the coastal towns (Inanga & Osei-Wusu 2004; Hoffman & Metzroth 2010). The chiefs retained a portion of the revenues generated for the purposes of local development. Soon after the colonial era had ended and in

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terms of the first republican constitution, the decentralisation process was formalised when the government of Kwameh Nkrumah promulgated the Local Government Act (Act 54 of 1961) (Inanga & Osei-Wusu 2004; Ayee 2002; Nkrumah 2000, p.55). This was in line with the international wave of decentralisation during the 1950s and 1960s (Conyers 1985a).

The next major wave of decentralisation in Ghana included the promulgation of the local government law – PNDC Law 207 – in late 1988 as part of the economic and structural reforms under the World Bank's Structural Adjustment Programme (SAP). The objective was to encourage local participation and decision making with the aim of finding solutions which would be applicable to the local problems because they had been suggested and implemented by the local people. This, in turn, led to popular participation in and better management of rural development than had previously been the case. The role of decentralisation as a means of national development was emphasised. It also used a wider variety of models than the colonial authorities had done when decentralisation had been used primarily as a tool for administration at the local level (Subramaniam 1980). Over the years Ghana has experimented with various decentralisation reforms, some of which have increased the intensity of decentralisation in terms of the availability of resources and the allocation of responsibilities.

1.2   The Problem

Decentralisation, if not properly implemented, may pose significant risks and challenges that may, in turn, lead to a deterioration in the provision of health services and, consequently, to poor health outcomes (Hoffman & Metzroth 2010; Lieberman 2002; Schwartz Guilkey & Racelis 2002). In addition, decentralisation may also result in inequities as regards the service delivery to citizens of the same country, depending on where they live (Akramov & Asante 2008). While decentralisation may not necessarily lead to inequities, defined in this context as the inequalities

stemming from preventable socio-economic conditions, the devolution of revenue sources combined with the disparities in the endowments of regions are likely to lead to disparities in the fiscal resources at the sub-national level (Faguet 1997). These disparities may then exacerbate pre-existing gaps in the services in fiscally poor regions and thwart the national efforts at reducing poverty and realising the national goals. Public services that are maintained at the sub-national level, for example, primary health, education, housing and sanitation, are crucial in empowering the poor and lifting households out of debilitating poverty.

Inequalities have severe implications for the welfare of the population, especially the poorer members of the society (Wagstaff 2002; Leon & Walt 2001; Smith, Bartley & Blane 2008). The persistence of inequalities makes it difficult to eliminate poverty because of the difficulties involved in providing members of the deprived groups with programmes of assistance. Deprived groups often face multiple disadvantages and discrimination and it is essential that these are confronted despite the seemingly impossibility of addressing them (Pauly 2008; Langer, Mustapha & Stewart 2007) . Health inequalities, in common with all other forms of inequalities, also have the potential to reduce social cohesion and, thus, resolving inequalities may lead to reductions in both violence and crime (Navarro 2000; Wilkinson 1999; Coburn 2000). Governments throughout the world, especially in the developed countries, are continuing to attempt to address inequalities in health as many of the causes of such inequalities relate to policy issues such as taxation, employment, housing, education and local government (Wallace 2005).

Several indices reveal both inequality and inequity in a number of socio-economic indicators in Ghana. In addition, much has been written on the socio-economic gap between the northern half of the country and the southern areas, especially with regards to levels of poverty and the allocation of health resources (Owens 2011; Ghana Statistical Service 2008; 2009; United Nations Development Programme 2010; United Nations Development Programme 2012). Vanderpuye-Orgle (2002) established that regional disparities, especially between the northern and the southern

regions of Ghana, have increased since 1992 – the year which saw the inception of the decentralisation policy. However, Vanderpuye-Orgle (2002) failed to provide a detailed description of the regional disparities and an assessment of the role which decentralisation had played in the increase in the disparities. Evidence available suggests that inequalities in terms of health variables persist between regions and districts (National Development Planning Commission 2012; United Nations Development Programme and Government of Ghana 2010). Nevertheless, in the area of health, decentralisation has been reported to have resulted in more equitable access to health care in Ghana, with this being attributed to both an increase in the budget allocations to districts and the more direct control by the districts of the spending decisions (Agyepong 1999).

This thesis critically examines the link between decentralisation and inequities in the health care utilisation in Ghana in order to determine the effect of decentralisation on the health inequities in the country. This was achieved by analysing the effect of changes in the intensity of decentralisation on health inequities, using health inequality indices (Jiménez-Rubio, Smith & Van Doorslaer 2008; Zhong 2010). The study covered 20 years of decentralisation reforms in Ghana. The period selected ensured the availability of data and also covered a period of significant decentralisation reforms within the health sector.

1.3   Objectives and Research Questions

1.3.1   Objectives

The overall research objective of the study is to explore the link between decentralisation and equity in health care utilisation by exploring the spatial dimension of equity in health in post-decentralised Ghana. The thesis realised this primary research objective by examining the inequities that exist in the utilisation of health services at the regional level. In addition, the study also decomposed the inequities in order to account for both intra and inter regional shares of the indices.

In order to fully understand the theoretical basis of health sector decentralisation the study also investigated the micro-foundations of health sector decentralisation and their impact on inequality by combining an extensive country-specific analysis with interviews with appropriate officials.

1.3.2 Research Questions

The study included two main research questions which were addressed by breaking them down into sub questions. The objectives of the first research question were achieved using quantitative methods whilst the second research question was addressed primarily using qualitative data.

1. To what extent are changes in equity in the utilisation of maternal health services associated with decentralisation?

   a. What is the level of maternal health utilisation and what are the variations in maternal health utilisation across regions?

   b. What is the level of maternal health and related inequities in Ghana across districts and regions?

   c. To what extent are the observed health inequities in maternal health a reflection of either inter or intra regional variations?

2. What are the factors that negatively influence the equitable utilisation of maternal health services in Ghana's decentralised system?

   a. What is the level of decentralisation in both Ghana and within the health system and how has the intensity of decentralisation changed over time?

   b. What were the reasons for health sector decentralisation in Ghana?

   c. How is decentralisation perceived to have impacted on health inequities in Ghana?

d. What are the perceived threats to health equities within Ghana's decentralised system?

e. What is the prognosis of policy makers as regards decentralisation in Ghana's health system if it is to positively influence the attainment of sectoral goals and achieve a reduction in inequities?

1.4   Justification for the Study

Decentralisation reforms have been implemented in Ghana for just over 25 years and, thus, there is sufficient relevant data available to query issues related to the effects and outcomes of decentralisation. In addition, there is also a body of, albeit, very limited quantitative and econometric work on decentralisation and its implications for equity in several countries (Uchimura & Jütting 2009) and that is especially significant for developing countries including Ghana. The study will use methods that have been used mainly in developed countries in both a developing country and a new context. However, the study also improved the methods with the inclusion of new anthropometric measures and indicators to contextualise and enhance the analysis and understanding of issues. Thus, the study will contribute to the growing body of literature on the subject of decentralisation and the way in which it relates to the social sectors while also offering much needed theory building using empirical evidence on the role of decentralisation in influencing various aspects of health related inequity.

Ghana is currently in the process of reviewing the existing policy on decentralisation and instituting a new policy that may confer on local government greater administrative and financial authority than is currently the case (Hoffman & Metzroth 2010). Despite the fact that political, administrative and fiscal decentralisation is highly constrained in Ghana, it is time to query the effect of more than 25 years of reforms on tangible outcomes in the social sectors. This, in turn, should inform modifications to and the implementation of the new policy as well as the direction of these modifications. The study will also contribute to filling a major

gap in the decentralisation theory as proposed by Zhong (2010) by providing an analysis of the micro-foundations of decentralisation policy in health from the perspectives of both practitioners and those responsible for implementing policy at a sub-national level.

1.5 Theoretical and Conceptual Framework

1.5.1 Decentralisation

Defining the concept of decentralisation may depend on the specific approach applied. However, a basic definition that has been generally applied defines decentralisation as "the transfer of authority and power in planning, management, and decision-making from higher to lower levels of organisational control."(Hanson 1998, p.112) This definition is, to some extent, independent of subject matter and may be applicable in a cross-disciplinary analysis of decentralisation. Mawhood (1983) defines decentralisation as the "sharing of part of governmental power by a central ruling group with other groups, each having authority within a specific area of the state". This definition focuses particularly on the spatial dimensions of decentralisation and goes on to state that the process of decentralisation entails the sharing of central government powers with other institutions, especially those which are either geographically separated or responsible for specific functions, or those which have been given jurisdiction over specific physical locations.

Makumbe (1998) identifies the following three fundamental areas in the decentralisation process, namely, power, authority and responsibility. Kasfir (1983) views decentralisation as a means by which authority and power are distributed horizontally rather than hierarchically while Work (2002, p.5) defines decentralisation as "the transfer of responsibilities for planning, management and resource raising and allocation from the central government and its agencies to the lower levels of government." Mundial (1999, p.108) Mundial (1999, p.108) provides the following holistic definition of decentralisation: "the transfer of political, fiscal and administrative powers to sub national units of government." Finally, Crook and

Manor (1998) and Ribot (2002) define decentralisation as a process by which a central government formally transfers powers to actors and institutions at lower, sub national levels in a political-administrative hierarchy. This definition, as culled from the public administration approach, has been used for evaluating the broad processes of decentralisation in developing countries (Cheema & Rondinelli 1983).

1.5.2 Decentralisation in Health

In broad terms decentralisation in health care entails the transfer of powers from a central authority (typically the national government) to more local institutions (Levaggi & Smith 2005). One of the most popular approaches to defining decentralisation in health care is the public administration approach which is summarised in the often-cited, four-part framework of delegation, deconcentration, devolution and privatisation (Cheema & Rondinelli 1983; Bankauskaite & Saltman 2004; Bankauskaite & Saltman 2007). The inclusion of privatisation in the framework is often heavily disputed since as, in terms of this model, services are moved from the public sector to the private sector. Existing political conditions and specific aims and goals will, however, determine the exact form which decentralisation takes. The goals of health sector decentralisation include improving the efficiency, equity, accessibility, responsiveness, and quality of health service delivery and, ultimately, improving the health of a country's population (Bankauskaite, Saltman & Vrangbaek 2004; Saltman, Bankauskaite & Vrangbæk 2007; Conyers 1985b; Bossert 1998; Mills et al. 1990).

Health care decentralisation usually encompasses most of the functions within the healthcare system. The only function that is often left untouched by decentralisation is strategic planning and policy making within the sector and this usually remains the domain of the central government (Saltman et al. 2007). Saltman et al. (2007, p.46) propose the following formal definition for decentralisation in health system, namely, "the transfer of formal responsibility and power to make decisions regarding the management, production, distribution and/or financing of health services, usually from smaller to larger number of geographically or organisationally separate actors".

Decentralisation in the health system aims primarily at effecting changes in four key dimensional areas, namely, authority, accountability, capacity, and use of information alongside the key functional areas of political/legal, fiscal, and organisational with the aim of improving system performance, outcomes and overall health status (Tidemand 2010).

1.5.3 Typology of Decentralisation

Various conceptions for decentralisation exist and are usually based on the subject matter being discussed or the activity or process being decentralised. Treisman (2002) identifies the following six conceptions of decentralisation, namely, vertical, decision-making, appointment, electoral, fiscal and personnel. Smoke (2003) and Work (2002), on the other hand, identify the three dimensions of decentralisation as political, institutional and fiscal. The literature often identifies the following four types of decentralisation, namely, deconcentration, delegation, devolution and deregulation, and based on the combination of the level of autonomy and location of accountability between local and central governments (Degefa 2003). This conceptualisation of decentralisation falls primarily within the public administration view of decentralisation. This thesis relies on a typology of decentralisation as presented in the literature and often used in health sector decentralisation.

This typology is often described as administrative decentralisation and refers to the transfer of functional responsibilities to the local level. Writers such as Smoke (2003), Ribot (2007) and Work (2002) have applied the public administration view of decentralisation to the definition of the concept of decentralisation. This view seeks to redistribute the authority, responsibility and financial resources for providing public services between the various different levels of government. In other words, it is the transfer of the responsibility for the planning, financing and management of specific public functions from the central government and its agencies to field units of government agencies, subordinate units or levels of government, semi-autonomous public authorities or corporations, or area-wide,

regional or functional authorities. The three major forms of administrative decentralisation as identified in the literature are deconcentration, delegation and devolution.

i. Deconcentration happens when central government allocates the responsibilities for specific activities or services to its regional branch offices. These regional offices may only implement decisions taken at the centre. Thus, in terms of deconcentration the authority in decision-making and management, as well as accountability, remains with the centre. This, in turn, implies that, as regards health systems, deconcentration involves a shift of power from the central office to the peripheral offices of the same administrative structure.

ii. Devolution reflects a transfer of substantial authority from the central government to the local governments that are often elected by their constituents. Thus, the local governments are accountable to these constituents. Devolution often includes administrative, political and fiscal decentralisation with significant decision making powers (Lister & Betley 1999). The areas of responsibility within a devolved system of government include finance and management decision-making and are often required to meet the developmental needs of the jurisdictions. As regards the health system devolution involves a shift of responsibility and authority from the central offices of the Ministry of Health to separate administrative structures within the public administration (e.g. local and provincial governments, and municipalities).

iii. Delegation reflects the transfer of selected functions to a lower organisational level with local governments or agencies executing certain functions on behalf of the central government. Despite the fact that, to a large extent, decision-making lies with the local government or agencies in charge,

the central government remains ultimately accountable for the decisions. Litvack, Ahmad & Bird (1998) contend that delegation encompasses an inherent principal-agent relationship. In the health system this often takes the form of either contracting out or creating semi-autonomous entities to perform specific tasks within the health system such as the delivery of health care.

1.5.4   Theories on Decentralisation and Inequality

A major concern in the design and implementation of decentralisation policies is the need to ensure the efficient and equitable provision of services. There is, thus, the need to determine the level of government which should be tasked with the responsibility of providing services if such services are to be efficient and equitable. A number of academics such as Oates (1972), Stigler (1957), Shah (2006) and; Eichenberger & Frey 2006) held various views on how this should be achieved.

Stigler (1957) argued that the provision of services by government is best achieved when government is closest to and chosen by the people. On the other hand, public choice theorists such as Oates (1972); Shah (2006) & Olsom (1969) presented the argument that, in order to eliminate the free rider problem, political jurisdictions and benefit areas should coincide. Oates (1972) proposed the correspondence principle, which argues that the consumers of these services should bear the burden of cost of the services. This principle evolved into the Functional Overlapping and Competing Jurisdiction (FOCJ). Eichenberger & Frey (2006) argue that jurisdictions need to be organised on a functional basis in such a way that they overlap geographically but with consumers being free to choose from the competing jurisdictions. Oates (1972) presented the decentralisation theorem which stipulates that jurisdictions should internalise both the costs and the benefits of public goods. Additional arguments presented included the subsidiarity principle which states that the taxing, spending and regulatory functions that may be more effectively exercised at lower levels

should not be assigned to higher levels of government unless there is compelling evidence to do so (Shah 2006). Finally, the principle of residuality states that local governments should be assigned only those functions or responsibilities that the central government is neither willing nor able to perform (Shah 2006).

As regards the relationship between local government and equity, applicable theory continues to be inconclusive on the way in which decentralisation affects equity and there has been no single reason suggested to explain the persistent inequities within a decentralised system. The pluralist theorists (Dahl 2005; Judge 1998) attempted to explain the persistence of inequities within a decentralised system by arguing that the very nature of democracy means that the various needs and demands of citizens will be met at different times and with varying degrees of success. However, elite theorists (Pareto 1935; Harding 1998; Mills 1956) disagree with this view, suggesting that inequalities are a consequence of the unequally distributed power which is vested in the hands of elite groups. On the other hand, the regime theory focuses on the significance of politics in society, presenting the argument that politics is organised in such a way that governments are less responsive to the needs of those groups that are socioeconomically disadvantaged (Judge, Stoker & Wolman 1998; Elkin 1987). Ecological theories, which do not attribute inequalities to either politics or a deliberate attempt not to meet the needs of specific groups, attribute the existence of inequalities to differences in the socioeconomic, demographic and even geographic characteristics of regions, districts, areas or neighbourhoods (Masotti & Lineberry 1976; Mosco 1996). The political economy approach, which unifies a number of explanations, attributes the existence of inequalities in a decentralised system to the interaction between political and economic processes in society (Rondinelli, McCullough & Johnson 1989; Kolehmainen-Aitken 2000; Prud'Homme 1995). According to this approach these factors threaten improved governance at the local level.

1.5.5 Measuring Health Inequalities

The concept of inequity is broadly based on the ethical notion of distributive justice. There is a close relationship between the concepts of inequality and disparities. The term health disparity reflects differences in the health status of groups and is often used interchangeably with the term health inequalities (Braveman & Gruskin 2003). On the other hand the term inequities is often used to describe differences (disparities and inequalities) that are of preventable nature and which are, thus, deemed to be unfair of unjust (Braveman & Gruskin 2003). Researchers have defined health inequities as variations in the health of individuals or groups and which are deemed to be both unjust and systemic (Dahlgren & Whitehead 1991; Whitehead 1991; Kawachi, Subramanian & Almeida-Filho 2002). These inequities in health may be analysed in terms of a number of dimensions; outcomes, utilisation and access to services. Thus, any measurement of health inequities starts with the measurement of health inequalities.

The following four main models have been used for measuring health inequalities, namely, the behavioural, materialist, psychosocial and life course models (Bartley 2004; Lohan 2007). The behavioural model attribute inequalities in health to the differing cultural attitudes to health and related health behaviours (Stronks & Mheen 1996; Blane 1995; Smith et al. 1990; Blane 1985; Lantz, Lynch & House 2001). Both the materialist and the psychosocial models provide an insight into the causes of inequalities at both the individual and the societal levels (Lohan 2007). At the individual level the materialist argue that an individual's access to tangible material goods and conditions that are associated with exposures that are either damaging to or protective of health (Bartley 2004; Adamson, Ebrahim & Hunt 2006). On the other hand, these two models attribute inequalities at the societal level to factors such as a society's ability to invest in health and social care, education and public transport – all of which may affect the health of the population of that society (Lynch et al. 2000; Adamson et al. 2006; Lohan 2007). The psychosocial model also attributes differences in health to the impact of adverse psychological exposures at

both the individual level and the level of the society. Finally, the lifecourse model does not provide a unique set of explanations for inequalities but incorporates elements of the materialist, psychological and behavioural models already discussed. The lifecourse model argues that the health status at any given age for a given birth cohort reflects an amalgamation of contemporary conditions and is an embodiment of prior life conditions from in utero onwards (Kawachi et al. 2002).

1.5.6   Evidence on Decentralisation and Health Inequalities

Although limited, empirical evidence on the effects of decentralisation in the health sector remains mixed. This section discusses such evidence on decentralisation and inequities in health. In the case of Argentina, Habibi, Huang, Miranda, Murillo, Ranis, Sarkar & Stewart, (2001) used a panel of 23 Argentine provinces over a 25 year period to provide evidence that revenue decentralisation had a significant impact on decreasing infant mortality. Robalino, Picazo and Voetberg (2001) similarly discovered that countries in which local governments manage a higher share of public expenditures tended to have lower mortality rates. Khaleghian (2003) noted that expenditure decentralisation was positively related to improved health outcomes in both low and middle income countries, while Robalino et al. (2001) posited that decentralisation may lead to increases in regional disparities in health expenditures as a result of the absence of a mechanism to transfer resources from rich to poor jurisdictions.

In a comparative study, Bossert, Larrañaga, Giedion, Arbelaez, & Bowser (2003) investigated the link between decentralisation and equity in resource allocation in Colombia and Chile. The study revealed that decentralisation, under certain conditions and with certain specific policy mechanisms, may improve the equity in resource allocation. In both Columbia and Chile equitable levels of per capita financial allocations at the municipal level were achieved through the use of allocation formulae, adequate local funding choices and horizontal equity funds.

Wagstaff (2005) pioneered the use of inequality curves and indices to answer the question as to whether income-related inequalities in the health sector are the result gaps between poor and less poor areas rather than the result of differences between poor and less poor people within areas. In the case of Vietnam it was discovered that inequality between provinces increased with decentralisation.

Jiménez-Rubio et al. (2008) used the concentration curve decomposition analysis technique pioneered by Wagstaff (2005) to explore health inequities in a decentralised setting using Canadian Community Health Survey data from 2001. This survey was the first wave of a nationally representative health survey of individuals aged 12 years and over living in Canada. The results showed that, within area variation was the most important source of income-related health inequalities, while income-related inequities in health care use were driven primarily by differences between provinces. Zhong (2010) expanded on the study by Jiménez-Rubio et al. (2007) using the perfectly decomposable Theil's Index after a change in the degree of decentralisation had revealed that the level of within province inequality in the use of doctor services in Canada had reduced. In addition, there was also a lower level of between provinces inequalities in the utilisation of three other health services examined. The overall results showed that inequity in health care utilisation in Canada is may be explained primarily by variations within provinces.

1.5.7 Synthesis of Theory

Thus, in assessing the impact of the political reforms of decentralising on inequalities in Ghana's health sector, this thesis combines a number of theoretical perspectives. The ecological and political economy approaches as governance theories are positioned within a materialistic explanation for health inequities.

1.6   Research Methods

1.6.1   Research Design

The study used a mixed methods research design, comprising the following two phases, namely, a quantitative, econometric analysis of survey data from the 2003 and 2008 Ghana Demographic and Health Survey (GDHS) and a qualitative analysis of the information gathered from field interviews. Qualitative and quantitative methods and data are often more powerful when combined, at different levels and in different sequences (Johnson & Onwuegbuzie 2004).   Combining the methods enables the use of one method for the purposes of verifying or refuting the results obtained using the other method. For example, a qualitative investigation may be used to triangulate survey results and explain the relationships/trends/patterns which emerge from a survey (Garbarino & Holland 2009). This study used the qualitative research approach to enrich the analysis of the relationships, trends and patterns that emerged from the analysis of the survey data.

The first phase of the study was an econometric analysis of household level data on health inequities from within and across jurisdictions. This involved conducting an inequality indices analysis to illustrate health inequities in Ghana. The index was then decomposed in order to determine the magnitude of the inequities that could be attributed to inter, as opposed to, intra jurisdictional disparities. The second phase combined a quantitative analysis of the data gathered and a qualitative analysis using the primary data gathered from the semi-structured interviews to conduct a review of the health sector decentralisation process. The quantitative and qualitative methods were applied for the purpose of triangulation as well as to complement each other by enriching the study with the extensive information which had been gathered from the depth of the data provided from the interviews.

1.6.2 Methods of Data Analysis

The quantitative data was analysed using descriptive analysis tools in order to fully understand the situation in Ghana. A statistical software package (STATA) was used to conduct both the regression analysis and the descriptive analysis.

In order to understand the micro-foundations of health decentralisation, the grounded theory analytical approach was used to analyse the qualitative data. This approach allowed the researcher to clearly determine and outline the major concerns of policy makers in addressing the issue of decentralisation, specifically in the health sector. The grounded theory approach is used by a researcher to achieve the four basic functions of theory research as identified by Denzin and Lincoln (2000; 2005), namely, the initiation, refocusing, reformulating and clarification of a theory even in situations where little is known about the issues in question (Hutchinson 2001).

1.7 Scope

This study focused on the issue of decentralisation and its impact on horizontal health inequities in maternal health utilisation. This was achieved by investigating how decentralisation has affected both inter and intra-regional health inequities in Ghana. As a result of the nature of decentralisation in Ghana and the availability of data, the study was able to do to do this by examining both the regional and the district levels. In order to contextualise the analysis adequately the study provided a description of the inequalities as regards selected variables.

1.8 Organisation of the Study

The study was organised into eight chapters as follows:

Chapter One (Introduction) introduces the study by clarifying the relationship between decentralisation and health inequalities. The chapter also contains the introduction and background to the study. In addition, the chapter touches on issues such as research motivation, problem statement and research questions.

Chapter Two (Decentralisation, Poverty Reduction and Inequality: Towards a Conceptual Framework): addresses the theoretical and conceptual foundations of decentralisation as it relates to inequities. The aim of this chapter was to provide a background to the study and build a logical framework for the study.

Chapter Three (Literature Review: Decentralisation and Health Inequality) reviews relevant empirical literature on decentralisation and inequality in health. Accordingly, the literature review discusses inequities and inequalities in health and discusses studies that link decentralisation and inequality/inequities as they pertain to the health sector.

Chapter Four (Methodology and Econometric Model) discusses the research design used in the study and focuses on the methods and techniques which the study used to realise the research objectives. Accordingly, the chapter contains a discussion of the study context, a detailed description of the data sources and the data collection instruments and techniques used for, an econometric model and estimation techniques.

Chapter Five (The District Assembly and Health System Nexus in Ghana) contains a review of the decentralisation process in Ghana, a discussion of Ghana's health sector and an assessment of health sector decentralisation in Ghana. Combining desktop research and interview responses, this chapter also explores the views of both policy makers in the health sector and also those who work in the decentralised structures at all levels.

Chapter Six (Inequities in Maternal Health Utilisation: Measurement and Decomposition) focuses on estimation, analysis and diagnostic tests for the econometric model. The chapter contains a descriptive analysis of health inequalities, an estimation of the econometric model discussed in Chapter four and the computation and decomposition of health inequality indices. Statistical tests were conducted on the research results to ensure their relevance, significance, robustness and accuracy. The results were then elucidated using tables and charts.

Chapter Seven (A Qualitative Analysis of Inequity in Ghana's Decentralised Health System) presents an analysis of the qualitative data gathered from the interviews. These discussions with policy makers provide an answer to the question regarding the effect of decentralisation on inequities in health. In addition, the chapter also examines the threats, if any, to inequities that exist in Ghana's decentralised system.

Chapter Eight (Conclusion) summarises the previous chapters and draws conclusions based on the analyses discussed in those chapters. The chapter also makes relevant policy recommendations, thus indicating the usefulness of the study to both the country and the research community. The chapter then positions the study within current theoretical and empirical debates, thus highlighting the empirical, policy and theoretical contributions of the study.

Chapter 2

Decentralisation, Poverty Reduction and Inequality: Towards a Conceptual Framework

2.1   Introduction

The single, most important rationale underlying local government and decentralised administration worldwide is to ensure the efficient and equitable provision of services to citizens. In several national contexts the provision of water, sanitation, public education, health services and other services has treated as local government functions. The issue of concern that has remained a subject of intellectual debate for some time is the way in which the efficient and equitable delivery of services may be accomplished in local government and decentralised administration and whether, in practice, this has been attained. Yet another issue of concern is the underlying explanation for the observed patterns of efficiency and inequality.

The chapter provides a coherent theoretical framework for the study by clearly outlining concepts and theories that aid in the understanding of the research problem. This is achieved by examining the various theoretical and conceptual issues relating to the efficient and equitable delivery of public services. The chapter then specifies the theories that would best explain the observed inequalities in health delivery under Ghana's decentralised local government system and indicates a conceptual framework for the purposes of the research study. These are then unified in a conceptual framework in terms of which inequities in health in Ghana's decentralised system will be analysed. The conceptual framework outlines the approach that was adopted to analysing inequities in Ghana's decentralised system.

2.2 Theoretical Understanding of Local Government

A theory is used to explain, predict, master and understand relationships, events, and behaviours. "A theory is a set of interrelated concepts which structure a systematic view of phenomena for the purpose of explaining or predicting" (Liehr & Smith 1999). Theories make generalisations about observations and, as stated above, consist of an interrelated, coherent set of ideas and models. The theoretical framework forms the structure that supports the underlying theory of a thesis, presenting the specific theory or theories which explains the reason why a specific problem both exists and persists and, finally, providing the basis on which a particular research study is conducted. A well-formulated theoretical framework helps the researcher to clearly identify the variables of a study and provides a general framework as a basis for the data analysis (Torraco 1997).

2.2.1 Basic Concepts of Optimal Efficiency and Jurisdictional Design

The first issue in the debate on efficient service delivery by local government and decentralised administration centres on the jurisdictional design. Simply stated, the question is what level of government may best fulfil the goal of the efficient allocation of services so strongly desired in service delivery? The first indication may be found in what has now been generally termed as Stigler's menu. Stigler (1957) established two principles of jurisdictional design. According to one of these principles, the representative government that works the best is the one that is closest to the people. The other principle is that people should be given the electoral mandate that empowers them to vote for the quantity and quality of public services they desire. The import of these principles is that, in order to achieve the efficient allocation of services in service delivery, decisions should be taken at the lowest level of government appropriate to this goal. The optimal size of the jurisdiction for the delivery of each service will vary according to the economy of scale and cost-benefit considerations. While some services, on the basis of economy of scale and cost-benefit considerations, may be delivered at the local government level, others would be more efficiently delivered at the regional or equivalent government level.

Unlike Stigler's menu, the principle of fiscal equivalency equates political jurisdiction with the benefit area in the optimal jurisdiction design. The principle of fiscal equivalency is closely associated with the public choice theorists, in particular, Olson (1969). Olson's premise is that it is critical that the political jurisdiction and the benefit area are one and the same in order both to eliminate the free rider problem and to ensure that the marginal benefit is equivalent to the marginal cost of production so as to ensure the optimal provision of public services (Olson 1969). The principle of fiscal equivalency may require that each public service be provided by a separate jurisdiction (Shah 2006).

The correspondence principle, first proposed by Oates (1972), bears a close resemblance to the public choice principle of fiscal equivalency. The correspondence principle states that the jurisdiction that provides a particular public good should comprise the group of people who consume the good and carry the cost of production of that good. Strictly applied, this principle would result in a large number of overlapping jurisdictions.

The correspondence principle for ensuring the optimal level for the provision of public goods was further developed by Frey & Eichenberger (1996; 1995; 2006) into the concept of Functional Overlapping and Competing Jurisdiction (FOCJ).

According to FOCJ, it is not necessary for service jurisdictions to be organised on the basis of geographical territories. They could, instead, be organised on a functional basis in such a way that they could overlap geographically but leave consumers free to select from among competing jurisdictions. However, if the FOCJ is to be effective, the following two conditions should exist. The jurisdiction should exercise full authority over its members as well as the power to raise the taxes required for the delivery of the public good (Shah 2006).

The decentralisation theorem, which was developed by Oates (1972, p.55), stipulates that each public good should be delivered by the jurisdiction exercising control over the minimum geographic area that would internalise the costs and benefits of the

public good. Several underlying reasons support this theorem. Firstly, these jurisdictions would have a greater understanding for the needs of local people. Secondly, in the main, local decisions are responsive to the beneficiaries of the service provided and this, in turn, promotes fiscal responsibility and efficiency. Thirdly, they eliminate unnecessary layers of jurisdiction and, finally, they promote inter jurisdiction (Shah 2006) competition and innovation. The decentralisation theorem has the potential for some limited central control or compensatory grants in the provision of public goods when spatial externalities, economies of scale and administrative and compliance costs so require (Shah 2006)

The subsidiarity principle which, according to Shah (2006), may be attributed to the social teachings of the Catholic Church provides yet another basis for the jurisdictional design for efficient service provision by local government. According to this principle, the taxing, spending and regulatory functions that may be more effectively exercised at the lower levels of government should not be assigned to higher levels of government unless there is compelling evidence for such a step. Shah (2006) explains that the subsidiarity principle was adopted as a guiding principle by the Maastricht Treaty as the basis for assigning responsibilities to members of the European Union.

The principle of residuality is the direct opposite of the principle of subsidiarity. This principle, which is applicable mainly in unitary states, provides that local governments are assigned only those functions or responsibilities that the central government is neither willing nor able to perform (Shah 2006).

2.2.2 Optimal Efficiency and Private Provision of Services

The management of public service delivery in both developed as well as developing countries is often faced with monumental management problems because of general public disillusionment with the performance of the public sector bureaucracies (Elcock 2004). This disillusionment with the state controlled provision of public goods inevitably opened the way for exploring alternative modes for the provision of

public goods (Gargan 1997). One such mode has been a market-oriented approach in terms of which the principle is to offer the consumer a choice of where to go to obtain a service. This has the advantage of promoting competition between service providers as regards making them more attractive to the clients they serve. The private sector approach has seen both non-profit and for-profit providers using a variety of market models as a substitute for the direct provision of services at either the national or local level.

It was assumed that the adoption of private sector approaches would enhance productivity efficiency and also improve the allocation of services as market decisions are assumed to be more efficient than the decisions of huge state bureaucracies (Nickson 2006). The IMF and World Bank directed Structural Adjustment Programme (SAP) of the 1980s and 1990s pointed to a reduction in the dominant role of the state in Africa as the primary strategy for stimulating economic growth and efficiency. Accordingly, the SAP adopted a two-pronged approach to reducing the role of the public sector in the economy (Nickson 2006).

According to Nickson & Alam (2006, p.26) this two-pronged approach "involved the transfer of responsibility for service provision both horizontally to the private sector through greater private sector participation and vertically to local government through decentralisation". It was anticipated that this two-way strategy would realise two objectives. It was expected that the transfer of responsibility for service provision to the private sector would increase productive efficiency by breaking down natural monopoly and enhancing competition (Alam & Nickson 2006, p.27) while, at the same time, the transfer of the function of providing public services to local government would enhance the efficient allocation of services (Alam & Nickson 2006 p.27).

2.2.3 Efficiency and the new Public Management

The notion of increased private sector participation in service delivery at the local government level was not new as it may be traced to the return to conservative policies during the Thatcher years (1970–79) in the United Kingdom. The dominant conviction was that the public provision of services was both inefficient and ineffective and that public officials were more concerned with their own interests rather than the needs of the service users. As a result, the conservative policy response was the privatisation and marketisation of public services (McLaughlin, Osborne & Ferlie 2002).

The concept of the minimal state enjoyed a new resurgence. This concept implied that the state was a necessary evil and, thus, the role of the state was, essentially, to provide an enabling environment. The state should plan and finance public services but the actual provision of such services was to be assigned to the independent sector, comprising the voluntary and community sectors as well as the private for-profit and non-profit sectors. The new focus was on market disciplines as a solution to the inefficient service delivery by the public sector. Marketisation and privatisation were the new strategies in the provision of effective public services (McLaughlin et al. 2002).

At the intellectual level this trend of injecting market efficiency into public service delivery gave birth to a new movement in public administration which has come to be known as the New Public Management (NPM) (McLaughlin et al. 2002). The basic concerns of the NPM are simple but strategically important.

Firstly, public administration should have the capacity to secure the economically efficient and effective provision of public goods. Secondly, the public sector and ministries should promote competition in the provision of public services and, thirdly, there should be a much stronger reliance on private sector management techniques on account of their superiority over state-centred management than was previously the case (McLaughlin et al. 2002).

2.3   Local Government and Equity

The dual objective of ensuring efficiency and equity in the delivery of public goods by local government inevitably requires careful scrutiny of the equity aspect of the problem. A central issue in decentralised administration is the way in which to ensure equitable distribution in the process of delivering public services to population groups and geographical areas (Bingham & Hedge 1991). The issue of equitable distribution has assumed such a central position in public service delivery that equity now constitutes a major pillar in the citizens' evaluation and assessment of the way in which their local governments implement their programmes (Morgan & England 1996).

No matter where citizens live in a decentralised district or municipality they expect good education for their children as well as water and sanitation and health services that respond promptly to their needs (Elcock 2004). Citizens do not consider patent differentials in the provision of public goods provision to different communities as an option in the performance of local government functions.

Nevertheless, the issue of equity in service delivery immediately raises difficult definitional issues (Bingham & Hedge 1991). There are, in essence, three different ways in which equity may be considered. Morgan & England (1996) identify these three ways as equal opportunity, market equity and equal results.

Equal opportunity implies that all citizens receive the same level of services while market opportunity involves the delivery of public service in proportion to the taxes paid by citizens. The equal results approach requires an agency such as a local authority to allocate its resources in such a way that the living conditions of people are the same. The definitions suggested by Morgan (Morgan & England 1996) replicate closely what Bingham and Hedge (1991) had identified much earlier, thus suggesting that there is little controversy about the appropriate approach to equity in local government as regards service delivery.

Bingham and Hedge (1991) and Morgan and England (1996) concur that, today, people generally tend to favour the equal opportunity approach to equity in service delivery. The market opportunity approach is considered to be a more conservative approach while the equal results approach is perceived as more being focused on change or as liberal in nature (Morgan & England 1996). In the main this research study adopts the equal opportunity interpretation.

2.3.1 An Assessment of Decentralisation Inequality and Poverty Reduction

The differentials in service provision have long been an issue in local government, especially in the multiracial municipalities in the United States where there have been court cases held about the differences in the municipal services provided to black and white neighbourhoods (Bingham & Hedge 1991). Invariably, the judges have ruled that differences in the services provided to black and white neighbourhoods violated the equal protection clause contained in the Fourth Amendment (Bingham & Hedge 1991), thus suggesting that, in a decentralised administration, public services should be available equally to all citizens (Bingham & Hedge 1991).

Inequalities in service delivery are a common occurrence in developing countries and service differentials in decentralised administration have been extensively studied. In their study of the Filariasis control programme in India, Baru, Rama, Gopal & Meena (2006) observed wide differentials in outcomes in three major decentralised units, namely, Kerala, Varanasi and Rajamundhry (Baru et al. 2006). The study noted that there were significant variations in both the coverage and effectiveness of services across the three sites. The treatment coverage was the highest in Kerala and, as compared to Kerala, much lower in Varanasi and Rajamundhry (Baru et al. 2006).

A careful scrutiny of the explanation for the different health outcomes in the three decentralised units in India underscore the fact that decentralisation in itself had contributed very little to closing the pre-existing socio-economic inequality gaps. In

fact, if anything, decentralisation had perpetuated the inequalities that had been in existence before.

According to Baru et al. (2006), the accessibility, availability and quality of health services varied across the three decentralised units and this, to a large extent, influenced the coverage of the filariasis programme in these three areas. Kerala had a better health services outreach than the other units, Rajamundhry was somewhere in the middle but, in Varanasi, the health services outreach was poor (Baru et al. 2006). The number of posts that were not filled at all levels in the health service was higher in Varanasi than in either Kerala or Rajamundhry.

A similar study on a poverty alleviation programme in the Indian state of Utar Pradesh showed that pre-existing inequalities had exerted considerable influence on poverty outcomes, thus leading the researcher to conclude that a higher degree of inequality was generally associated with the poor performance (Srivastava 2006). The researcher also concluded that a lesser degree of social and economic inequality among decentralised units is good for local level democracy (Srivastava 2006).

2.3.2 Is Decentralisation an Effective Instrument for Reducing Poverty and Inequality?

In the light of the emerging evidence of the apparent association between decentralised government and inequalities in both developed and developing countries it is clear that the issue should be subjected to further intellectual probing.

The main issue of concern of such probing should be whether decentralisation is an effective means of addressing poverty and inequality. Crook and Sverrisson (2001) provided a helpful framework for addressing this issue. According to them, several angles may be pursued, including pro-poor growth, social equity, human development and spatial or inter-regional inequality. Of these the most relevant in the context of this thesis is spatial and inter-regional inequality. Spatial and inter-

regional inequality often translates into inequality between culturally defined groups in the developing countries.

Devas (2006) examined the potential of decentralisation to serve as an effective tool for reducing poverty and inequality and curbing political corruption. Earlier studies conducted by Blair (2000) and Crook (2003) had also examined the same issue. The results of these studies did not point to any clear-cut conclusion that decentralisation has had an impact on reducing poverty and inequality – a surprising finding in view of the very high hopes that donors had had that the closer the decision-making was to the people, the greater would be the responsiveness of such decisions to local needs and accountability. Indeed, some studies have increased the hope that decentralised administration would facilitate the accelerated achievement of the Millennium Development Goals (Kiyaga-Nsubuga 2007).

However, the reality is that the empirical research on decentralisation and its impact on the reduction of poverty and inequality have produced very mixed results. This implies it would be unwise for any policy-maker or scholar to categorically defend decentralisation as an effective tool for addressing poverty and inequality.

The study conducted by Blair (2000), which was a cross-national research study on democratic decentralisation in six developing countries, established that in some of the countries studied, decentralisation had impacted positively on participation and accountability but had had very little effect on inequality and poverty. Crook and Manor (1998) performed a similar study in India, Bangladesh, Cote D'Ivoire and Ghana. The results were similarly mixed for the study found that the delivery of public services had improved in most of the countries studied but was particularly good in Karnataka, India (Crook & Manor 1998).

On the other hand, the study found the citizens' satisfaction with the responsiveness of local government ranged from good in Karnataka (India) to poor in Ghana (Crook & Manor 1998). Thus, while some poor groups had benefited from decentralisation,

others were unlikely to derive any benefit (Crook & Manor 1998). Other studies have produced the same mixed outcomes (Crook 2003; Crook & Sverrisson 2001).

It would, thus, appear that decentralisation alone will not rectify any pre-existing socio-economic inequalities and, indeed, is more likely to perpetuate or even aggravate such inequalities. It would, therefore, seem that the very high hopes pinned on decentralisation as a instrument for alleviating poverty and inequality may have been misplaced and decentralisation has not had the socially expected impact it was hoped to have in the past. This thesis aims to provide evidence of the current situation.

2.4 Theoretical Explanations for Decentralisation and Persistent Poverty and Inequalities

However, if decentralisation has been ineffective in addressing poverty and inequality and if differences in service provision continue, even with decentralised government, there must be theoretical explanations for the continuing differences. These theoretical explanations have been extensively addressed within the literature on American urban politics with race preference, class preference, power elite theory, ecological theories and decision-rule explanations emerging as the most common explanations (Bingham & Hedge 1991; Judge et al. 1998). However, while some of the theories may be relevant to an African country such as Ghana others may not be as relevant.

It is important to discuss the leading theories with a view to identifying those that best explain the inequality in health outcomes in Ghana – the research topic of this thesis.

2.4.1 Pluralism Theory

The founding father of pluralist theory is Robert A. Dahl (1961), who sought to reject radical left theories which suggested that inequalities in democratic societies such as the United States of America were the purposive and even deliberate design

of the powerful classes or the elite (Judge et al. 1998). In his classic work, *Who governs? Democracy and power in an American city: New Haven* (1961) Dahl argued that, in a democratic society, even if there is dispersal of power in so far as several groups, and not one group or even a few groups, control the power resources even if the demands articulated by each are not necessarily or successfully acted upon, democracy does have merit in it is a system in which power is fragmented rather than concentrated.

Different groups will articulate their demands in different sectors at different times and with varying degrees of success. The exercise of political power is not embedded in formal institutions only such as elections and representative bodies (Dahl 1961). The fact that decision-making is disaggregated and the outcome of the bargaining process is uncertain binds citizens and their groups to the process (Dahl 1961). According to Robert Dahl, no one group may permanently wield political power in a democratic society to the eternal detriment of all other groups. It is in embedded in the very nature of democracy that all groups share power in different circumstances (Dahl 1961). According to Judge (1998), after this classical formulation of the theory by Dahl different versions of pluralism came into existence. The central argument, however, remained unchanged.

2.4.2   Elite Theory

In its classical formulation by two Italian sociologists, Mosca (1939) and Pareto (1935), elite theory proposes that power inequality is a fact of life. Liberal democracy does, indeed, possess positive characteristics such as universal franchise and free competition. However, these make no difference to the reality of elite rule. Liberal democracy provides a means for replacing one group of elites with another only. Michels (1938), who was a student of Mosca and Pareto, argued that power inequality existed even in democratic organisations that were committed to egalitarian goals, in particular, socialist political parties and trade unions. Elite theorists argue that, regardless of the widely avowed democratic ideals of

egalitarianism, elites are critical for the management of increasingly complex societies. In other words, technocratic elites are a critical requirement for the effective management of complex and modern societies (Harding 1998).

Mills (1956) perceived the growth of the power elite as the inevitable consequence of modern historical trends although it is neither natural nor desirable. Mills (1956) maintained that, as the pluralists argued, there had been a time in the past when power had been dispersed in the United States of America. This was attributable to the existence of a large number of small-scale leaders in business, politics and military affairs who had shared power with leaders from other institutional spheres such as the family, church and school. As a consequence of the increasing bureaucratisation of power there had developed an interconnection between large business corporations, the central executive machinery of government and the military establishment (Mills 1956). The final product had been a military/industrial complex in which a few top decision-makers in the three key power domains had had the opportunity to monopolise crucial decision-making as a result of their control over vast physical, financial, political and intellectual resources (Mills 1956).

The emphasis in elite theory is that power is unequally distributed in society and is concentrated in the hands of a few elites. Accordingly, political, social and economic inequality is real, even in liberal democratic societies.

2.4.3 Regime Theory

Stoker (1995) explained that the central notion of regime theory is that politics is important. In this sense regime theory is opposed to all kinds of determinism – social, economic or political. The basic premise of regime theory is that decision-makers have a relative autonomy. However constraining systemic power may be, there is always room to influence decisions (Elkin 1987). However, the way in which politics is organised is such that government is less responsive to groups that are socially and economically disadvantaged than more advantaged groups. Politics in modern, democratic societies is organised in a way that does not easily provide for

large-scale, effective, popular participation because politics has become complex, involving several instructions and actors engaged in an intricate relationship. Accordingly, participation by the mass of the people is both unequal and ineffective and, thus, inequality becomes inevitable (Stoker 1995).

2.4.4 Ecological Theories

It would appear that the theories discussed thus far suggest either a conspiratorial theory of discrimination or the ineffectiveness of mass participation in politics and weak influence on decision-making. However, ecological theory contains no such assumptions and implications. The fundamental premise of ecological theory is that the provision of public goods and services may be explained by the characteristics of regions, districts, area or neighbourhoods. In effect it is the accident of history or geography that best explains inequality (Masotti & Lineberry 1976). It is, thus, not possible for game reserves, botanical gardens, universities, hospitals and many other public assets to be made available to every district or community as socio-economic features such as population density, type of vegetation or terrain may affect the distribution of public goods.

In the specific context of Ghana conspiratorial theories and theories of ineffective participation in decision-making do not explain the wide disparities in the health service provision that have been observed under decentralisation. The northern area of the country, where poverty and inequality persist relative to the rest of the country, also happens to exhibit unique ecological features, such as sparse populations, low population density, dry savannah conditions and higher than average levels of poverty. Indeed, the northern area comprises 40% of Ghana's territory but contains 21% of the population only. Such conditions would require a monumental effort on the part of decision makers to minimise the existing high levels of inequality under the political and administrative decentralisation. This study will demonstrate that wide disparities in the provision of health services exist between regions in the northern areas of Ghana and regions in the relatively more

developed south. However, this is not the product of either elite manipulation or an ineffectual voice on the part of the residents of northern Ghana. In fact, it is ecological theory that best accounts for this gaping socio-economic inequality.

2.4.5 A Political Economy Approach

The political economy approach provides a final explanation for the existence and the persistent of inequalities in a decentralised system with political economy being used to analyse the interplay between political, social and economic factors. Mosco (1996, p. 24) defines political economy as "the study of *the social relations, particularly the power relations, that mutually constitute the production, distribution, and consumption of resources*". After defining political economy as a means with which to address issues pertaining to both the household and the community Mosco (1996) concludes that political economy may be regarded as a broad based and variegated approach to all social analysis.

Decentralisation reforms may be analysed using the political economy approach as this approach analyses the interaction between political and economic processes in society (Manor 1999). The political economy approach systematically models the behaviour of government, taking into account both the political and the institutional contexts. In analysing decentralisation from a political economy perspective the emphasis is on the central role of politics in decentralisation, focusing on state–society relations, on how power is distributed and exercised and on who shares similar interests. It also seeks to answer the question as to the way in which incentives are shaped by both formal and informal institutions.

From a political economy perspective, successful decentralisation takes into account a multiplicity of factors that shape the incentives and interests of different actors and institutions. The capacity of local government, an engaged political leadership, strong political parties committed to popular participation, and social actors/organisations that are able to organise effectively and engage with the state at the local level are crucial. In a situation in which these factors exist and are

effectively aligned, decentralisation may certainly play a role in making local authorities more accountable and responsive and the decision-making processes more participatory than would otherwise have been the case.

As regards its specific application to health inequities in Ghana's decentralised system, the political economy approach may be used to examine factors that threaten the improved governance of health sector at the local level. This approach may also expose any bargaining between national and local elites who may be more concerned about maintaining a favourable balance of power among them than in promoting development at the local level. The political economy may also be used to explore the ways in which local leadership may have hijacked the process and stifled genuine participation and accountability on the part of the population. In addition, the political economy approach also enables an investigation into whether authorities at the central level may be holding onto as much power and authority as possible while simultaneously letting go of key responsibilities for which they do not wish to be held accountable. The political economy approach also provides a basis for querying the transfer of administrative responsibilities to local levels without adequate financial resources. The factors cited above all render the equitable distribution or adequate provision of services more difficult and may, in fact, undermine the effectiveness of local government institutions.

2.5   The Conceptual Framework

This chapter has examined the theories underlying this study by unpacking concepts and theories relevant to decentralisation, inequities and poverty reduction. This, in turn, led to a discussion of those theories that explain the possible reasons why inequities and inequalities may persist within a decentralised system, thus providing the basis for conducting this study. The conceptual framework will bring these together and provide a logical and coherent approach to understanding inequities in Ghana's decentralised system.

The conceptual framework used in this study is based on the concept of Horizontal Inequalities (HI) which was pioneered by the Centre for Research on Inequality Human Security and Ethnicity (CRSE) at Oxford University(Stewart & Langer 2007) .

Income inequalities exist between individuals and are known as vertical inequality. Horizontal inequalities occur between culturally and geographically defined groups that are of a cultural, social, political and economic nature. Horizontal inequalities occur when cultural identities overlap with political, economic, social and cultural inequalities. When political, social, cultural and economic inequalities overlap the resultant instability may manifest in the form of rebellions and protests and development may be retarded (Stewart et al 2007).

The horizontal inequalities framework also alludes to the importance of vertical inequalities – inequalities among and between individuals. It is based on the argument that horizontal equalities are important components in the reduction of inequalities between individuals. In a number of situations, efforts to reduce inequalities between individuals may be futile if no attempt is made to mitigate inequalities between the groups to which these individuals belong.

Horizontal inequality is a concept important for development, peace and security and it is for this reason that the inequalities in the health service delivery should be a focal point in Ghana's decentralisation administration. The HI approach also offers an explanation for the way in which differences between regions and districts in multiple dimensions serve to perpetuate inequities at the individual level as regards health utilisation.

2.6   Chapter Summary

The chapter discussed major concerns with regards to the efficient allocation of services and jurisdictional design, addressing the question of the level of government which is the best suited to realising the goal of efficient allocation that is so important in service delivery.

The chapter then examined the implications of decentralisation for efficiency and equity in public service delivery, concluding that there is a need to examine equity from the viewpoint of equal opportunity for all local citizens. In analysing the effect of decentralisation on poverty and inequalities it has been noted that decentralisation has produced mixed results as regards reducing poverty and addressing inequalities between groups. The chapter concluded that ecological theories and a political economy approach all provide reasonable explanations as to the reason why inequalities persist in Ghana's decentralised system.

The chapter concluded by outlining the horizontal inequities framework as a lens for analysing the inequalities in decentralisation within the Ghanaian context.

Chapter 3

Literature Review: Decentralisation and Health Inequality

3.1   Introduction

The objective of this chapter is to review existing literature on decentralisation and the effects of decentralisation on inequality/inequity in the social sectors of an economy. Despite the fact that a substantial body of literature exists on the issue of decentralisation, there is limited empirical literature on the link between decentralisation and equity in the health sector, especially in developing countries. The literature review includes empirical literature on the decentralisation of health systems and the link between decentralisation and equity in the social sectors, focusing on the health sector. The chapter begins by examining the concepts of health inequities and inequalities. This is followed by an overview of techniques and approaches which may be used to measure inequality and a review of some empirical applications of these techniques. The chapter then discusses the issue of health inequities and the way in which this issue relates to the main theme of the study by outlining empirical literature on decentralisation and health inequalities/inequities.

3.2   Health Inequity

The concepts of health inequality and health disparities represent two sides of the same coin and simply reflect the differences in health between groups or populations (Kawachi et al. 2002; Gakidou 2000; Braveman & Gruskin 2003; Pradhan, Sahn & Younger 2003). These differences may arise as a result of a number of factors, for example, biological variations, individual choices and also the external environment and other contextual factors beyond the control of the individual. The issue of inequalities in health is well documented and a number of underlying causes of these inequalities have been identified (Marmot 2001; 2005;

Shin & Kim 2010; Wagstaff & Claeson 2004; Wagstaff 2002). It often happens that it is deemed either impossible or unacceptable to modify or change a number of the factors resulting in health inequalities and, thus, such inequalities in health continue to prevail.

In the main the term health inequality has been applied in research to describe three major differences in health, namely, health differences between individuals, health differences between population groups and differences between groups occupying unequal positions in society. Nevertheless, no matter how researchers view the concept of health inequalities, it is generally accepted that the concept is a descriptive concept, simply describing patterns of health and refusing to make value judgments as to what should be (Peter & Evans 2001).

As opposed to the concept of health inequality, the concept of health inequities, by definition, often raises issues with moral and ethical dimensions (Whitehead 1991, p.5; Kawachi et al. 2002, p.647). As explained by Dahlgren and Whitehead (1991) health inequities are deemed to be unfair and unjust and also avoidable (Dahlgren & Whitehead 1991). Despite the fact the majority of people accept variations in health between individuals as unavoidable, when these differences are socially structured, such differences are judged to be inequitable. This is often the case when the health differences which are linked to broader social inequalities are also associated with poor governance, corruption or cultural exclusion.

According to Sen (2002), there is immense scope to the issue of health equity and it is not possible for the concept to be concerned with health only. He argues that an examination of health equity must be conducted in congruence with the much broader issues of fairness and social justice in all their dimensions, be it economic or political. He further points out that health equity should not merely be about the distribution of health and health care and that it is essential that equity in the achievement and distribution of health be fully incorporated into understanding the broader concept of justice (Sen 2002).

Sen (2002) points out that, in understanding and addressing health inequity, the major concern should be the lack of opportunity for all individuals to achieve good health because of inadequate social arrangements. Sen (1992) concludes that there is a major difference between a social or societal barrier to the prevention and treatment of a condition and the individual's personal choice. This, in turn, renders it important to differentiate between the achievement or attainment and the capability that societies and communities provide to enable people to realise their choice outcomes. Thus, the case for health equity must not merely be a demand regarding how health care should be distributed but should encompass several influences of varying kinds, such as individual incomes, food habits and life styles, on the one hand, and the epidemiological environment and work conditions on the other hand. Thus, health equity should not be restricted to the inequality of either health or health care only, but should take into account the arrangements pertaining to resource allocations and all other arrangements that link health with the general features of affairs of state and political affairs.

According to Kawachi et al. (2002) and the McGillivray, Indranil, & Lawson, (2011), health equity also reflects the manifestation of differences in the quality of health and health care across various population groups. These differences result from unequal economic and social conditions and are both systemic and avoidable (ibid). There is a multiplicity of factors that influence the individual's need to avail him- or herself of health care services. However, in many instances the conditions that drive health inequities are neither natural nor inevitable but are rather the consequences of public policies. These may include differences in the "presence of disease", health outcomes, or access to and utilisation of health care.

Defining inequity in this manner highlights two principles of equity, namely, vertical equity and horizontal equity. In the case of health services vertical equity – "unequal treatment of unequals" – implies that people with varying health needs and socioeconomic conditions should be treated differently in the health services are to be equitable. On the other hand, horizontal equity – "equal treatment of equals" –

implies that people with similar health needs and socioeconomic status may be expected to be treated the same(McGillivray et al. 2011; Culyer 2001; Culyer & Wagstaff 1993). Vertical equity is used primarily in relation to financing where individuals who are able to afford to purchase health care are expected to pay for such health care while others are either subsidised or provided with alternatives to ensure they are able to afford to meet their respective health care needs (Wagstaff & Doorslaer 2000; McGillivray et al. 2011). On the other hand, horizontal equity is widely applied in the analysis of health care utilisation (Wagstaff & Van Doorslaer 2000). Horizontal equity in health may be analysed in terms of access, utilisation and outcomes (Oliver & Mossialos 2004; Donabedian 1972) .

Analysing outcome equity presents a major challenge, as a significant degree of the influence on health falls outside of the domain of policy (World Bank 2005). Equal access to services is based on the assumptions that individuals are given equal opportunities to access such services, for example, by fees not being charged and resources being distributed equally across the regions. Even if it is possible to measure different indicators of access, such as waiting times, availability of resources, and presence of user charges, it is rarely possible to observe and measure access itself. Utilisation, on the other hand, is a function of both supply and demand factors, and it may be observed directly(Allin 2006). Thus, this study uses the indicators of inequality in health service utilisation in order to measure equity.

According to O'Donnell and Wagstaff (2008), there typically exists inequality in the utilisation of health when the latter is analysed in relation to certain socioeconomic criteria such as expenditure, incomes, assets or wealth. The exact pattern of utilisation varies depending on the country's specific situation. Thus, to measure inequity, inequalities in health must be adequately standardised for differences in need and it is only after this has been done that inequalities may be interpreted as inequities.

It is, thus, clear that, in order to examine equity in achievement, be it utilisation or outcomes, it is important to examine health care distribution and also whether there is equity in the allocation of health care resources. There are several studies available (Bago d'Uva, Jones & Van Doorslaer 2009; Wagstaff et al. 1999; Stewart & Langer 2007; Van Doorslaer, Koolman & Jones 2004; Van Doorslaer, Masseria & Koolman 2006; Hernandez & Easp n.d.; Morris, Sutton & Gravelle 2005; Van Doorslaer et al. 2008) on the issue of horizontal equity in health care in the OECD countries. The results of these studies tend to vary depending on the measure of utilisation applied (Mackenbach et al. 2008). Studies of this nature have been constrained in low coverage settings, as a result of the unavailability of data on measures of income health care and need and the conceptual challenge involved in identifying either need or expected need.

3.3   The Conceptualisation of Equity

A major debate that continues to rage among health experts and policy makers in the area of health inequity is on the nature of fairness in access to, as well as the utilisation and distribution of, health resources. Being defined as inequalities of an unfair nature, the concept of health inequities has as a central theme in the concept of social justice and how it relates to health. The questions to be addressed by this section then become, What is unfairness or unjustness in relation to health? and How may these unfair and unjust situations be rectified? This section provides an answer to these questions by examining Rawls's theory of justice as fairness and Sen's capability theory of justice.

As principles for evaluating laws and institutions from a moral standpoint, theories of social justice serve as standards against which existing institutions may be judged (Phillips 1979, p.314). The two theories cited above provide a broad view of the concept of social justice. Rawls provides a basis for understanding what a just or fair society should look like, no matter the dimension in terms of which the society in

question is being examined. In contrast, Sen's concept of social justice provides a means of judging on a scale whether a particular society is more just than another society. Unlike Rawls' theory of justice as fairness Sen's the capability theory of justice (2009) provides a means of assessing an improvement in justice and not simply prescribing a movement towards an ideal situation of justice which may be envisioned in theory but is difficult to realise in practice (Sen 2009). Other theories are not considered primarily because they do not offer adequate explanations of justice with regards to health utilisation. Examples of such theories include the egalitarian theory that argues that access to health care remains every citizen's right and ought not be influenced by income and wealth and the Marxist theories that operate on the principle of to each according to his or her needs but fails to adequately address the issue of need. Utilitarianism limit its perspective to the concept of utility, ignoring everything else, and, to some extent, remain unconcerned by inequality in utilities but concentrates instead on maximising the distribution independent sum total of utilities (Sen 2002).

3.3.1 Rawls's Theory of Justice

Widely acknowledged as the most salient theory of justice in its time, in the main the theory formulated by(Rawls 1971) answers the question as to what is just and fair in society. The theory is often described as an institutional theory of justice because it proposes a comprehensive framework for the structure of the social institutions (political, economic, legal or social) which are being assessed. The theory is grounded in the methodological strategy of social contract theory as Rawls argued that justice is best understood as fairness and, by implication, principles of justice which derived from a fundamentally fair decision making process in society may automatically be considered as just. Rawls argued that;

> The basic structure is the primary subject of justice because its effects are so
> profound and present from the start. The intuitive notion here is that this
> structure contains various social positions and that men born into different

positions have different expectations of life determined, in part, by the political system as well as by economic and social circumstances (Rawls 1971 p. 54)

Rawls argued that the basic structure of societies and the major institutions that exist within them play a pivotal role both in regulating the distribution of goods and social burdens to the members of society and in determining the life chances of these members of society. He pointed out that these basic structures and institutions generate inequalities by favouring certain starting points over others (Rawls 1971). According to Rawls, these inequalities are pervasive and significantly affect an individual's opportunities in life. He explained that the principles of justice should be applied to these inequalities which have been born out of the basic structure of society (Rawls 1971).

Rawls introduced the concept of primary goods which he considered to be the metric for assessing interpersonal comparisons of welfare – the basis upon which one individual would be considered better off than another. According to Rawls, a primary good is "a good every rational man is presumed to want" (Rawls 1999; Coogan 2007). Rawls cites the following examples of such primary goods, namely, rights and liberties, powers and opportunities and income and wealth, but stating clearly that the list he provides is not exhaustive (Rawls 1999). From Rawls' perspective, primary goods serve as the basis of equality, thus rendering such primary goods and the institutions that distribute these goods the subjects of justice. This, in turn, means that the principles of justice are applied both to these goods and to the mechanisms for distributing such goods.

Based on this viewpoint, the least advantaged members of a society are judged based on their holdings of primary goods with these primary goods operating as the basis for measuring justness. In conceptualising justice as fairness, Rawls argues that social arrangements are communal endeavours which are aimed at advancing the progress of all who form part of the community. All inequalities, be they the result of

birth, historical or natural endowments in primary goods, are undeserved and should be rectified by people in a cooperative society. Despite the fact that, in his original conceptualising, Rawls (1999) did not include health care, he does argue that, in not providing an exhaustive list of primary good, he left room to include health care and, thus, in applying Rawls theory of justice to health care, health care is best included as a primary good (Rawls 1997; Coogan 2007). This argument is supported by the definition of a primary good, with proponents arguing that "[h]ealth and health care are reasonable additions to the primary goods because it is a universal need, necessary for carrying out conceptions of the good, regardless of their content"(Coogan 2007; Rawls 2009; Bommier & Stecklov 2002).

Thus, from the justice standpoint, Rawls argues that society is responsible for improving the lives of its least advantaged members and, therefore, the main issue to be addressed in attempting to attain justice is how this should be done in order to improve the lot of the naturally disadvantaged. Rawls attempted to answer this question using two principles of justice. The starting point of these principles is the "veil of ignorance" – the situation in terms of which individuals in a given society are unaware of their own holdings of primary goods. These principles provides insights into the decisions individuals would make from behind the veil of ignorance. Firstly, the principle argues that

> … each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others (Rawls 1999).

Rawls states simply that, as long as individuals in society are unaware of any previous advantages or disadvantages, basic liberties and freedoms must be shared equally with all. The first principle is priority and it must always take precedence over the second principle which states that, in the situation of inequality, the difference principle should apply and that redistribution should be done *if*

> … they are to be of the greatest benefit to the least-advantaged members of society, consistent with the just savings principle (Rawls 1999).

Again, Rawls points out that society should be fair and just at all times and that the only condition under which a departure from equality in primary goods – a departure from fairness is deemed as necessary – is acceptable is when such a departure results in the betterment of those who were the worst off under such distribution. Rawls then sums up these two principles in what he terms the general conception of justice, which states that:

> All social primary goods – liberty and opportunity, income and wealth, and the bases of self-respect – are to be distributed equally unless an unequal distribution of any or all of these goods is to the advantage of the least favoured (Rawls 1971 p. 303).

3.3.2   A Capability Theory of Justice

Based on the social choice theory and his previous work on the capability approach, Sen presented a comparative theory of justice, which focuses on the practical reason behind which society would be chosen over another as a fair and just society. Sen's capability theory focuses on the decisions which must be taken in order to achieve a more just society rather than on speculating about what a perfectly just society is. A capability approach to justice is considered as a partial theory on justice only in view of its flexible and multipurpose nature (Nussbaum 2011; Sen 2009; Sen 1993). The capability approach (Sen 2009) focuses on the individual's opportunity to do what he or she has reason to value. The approach is concerned primarily with the ability to achieve various combinations of "functioning" that may be ranked and compared with each other, focusing on actual opportunities of living by examining what an individual is able to do and not what the individual actually does.

The capability approach argues that the best metric for interpersonal comparisons is an individual's "functions and capabilities". Sen argues that it is not sufficient to achieve equality in respect of people's formal rights and freedoms and that this must be backed up with equality in substantive freedoms or capabilities. Capabilities are defined as those beings and doings that are central to our understanding of ourselves

as human beings and which constitute human life. Sen (1992) and Nussbaum (2011) also refer to the issue of basic capability which they define as "the ability to satisfy certain elementary and crucially important functioning up to certain levels". These definitions facilitate the conceptualising of justice from a capabilities approach that already has embedded in it the issue of health, as health is essential to human functioning.

Sen provides a more practical theory in that he moves away from providing answers to questions about the nature of perfect justice to formulating a theory that addresses the issue of the way in which justice may be enhanced and injustice removed. In terms of this theory, failures in health provide important information about the injustice of particular social arrangements and may actually supplement assessments of these arrangements in general. In this context, equity in the utilisation of health as defined by this thesis implies the elimination of differences, marginalisation or discrimination as a result of socioeconomic status and/or geographical locations (Nussbaum 2011).
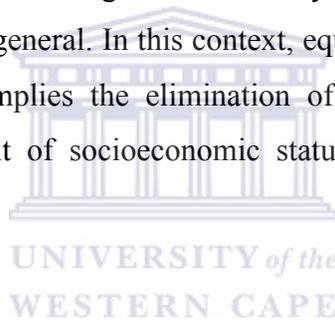
3.4   Models for Health Inequality

The sections above elucidated the concept of health inequities and the way in which health inequities relate to health inequalities. Conceptualising inequities as inequalities, which are unjust in nature, highlighted the need for a better understanding of inequalities and how inequalities may be viewed. A number of models have been applied to explain both the existence and the persistence of health inequalities in society. Bartley (2004) identifies the four groupings of models that may be used to explain health inequality as behavioural, material, psychosocial and the life course models. These models all enable the analysis of inequalities in varying contexts and perspectives.

3.4.1 A Synopsis of Alternative Explanations

The behavioural model suggests that health inequalities are an outcome of differing cultural attitudes to health and related health behaviours (Lohan 2007; Bartley 2004). On the other hand the psychosocial model focuses on the psychological impact of adverse psychosocial exposures, such as stress, hostility, hopelessness, loss of control or, collectively, the impact of 'misery' on health (Macleod & Smith 2003, p.565). The psychosocial model may also be expanded to provide an explanation at the level of the society or community. At this level the psychosocial model attributes inequalities in health to broader societal inequalities in incomes and socioeconomic positions (Lohan 2007). This may potentially lead to psychosocial reactions which affect people's vision of self-esteem and forms of social cohesion. Proponents of this viewpoint identify the channels through which health may be affected as psycho-neuroendocrine mechanisms and unhealthy coping behaviours, for example, excessive drinking and smoking.

The materialistic model attributes the existence of health inequalities to material differences between individuals and also between societies. The lifecourse approach to understanding inequalities in health does not provide a completely new understanding of health inequalities as compared to those approaches already discussed. The lifecourse approach incorporates elements of the materialist, behavioural and psychosocial models but lengthens the causal chain of the explanations provided in these models. The lifecourse explanation suggests that the health status at any given age for a given birth cohort reflects not only contemporary conditions but is also the embodiment of prior life conditions from in utero onwards (Kawachi et al. 2002, p.650). This model highlights the temporal ordering of exposure variables and their interrelationships.

3.4.2 Political Economy and Health Inequalities

In order to fully understand the role of the political process of decentralisation in either the existence or persistence of health inequities this study applies the

political economy approach positioned within a materialist/neo-materialist paradigm. The materialist/neo-materialist arguments offer explanations for the existence of health inequities at both the individual level and the societal level. At the individual level the materialist explanation refers to how an individual's access to tangible material goods and conditions such as food, housing and amenities are inextricably linked in a way that may impact on the individual's health in either a positive or negative way (Adamson et al. 2006). Similarly, at the level of the society, the materialist suggests that the material conditions prevailing in a society, for example; levels of investment in health and social care, education and public transport, affect the health of the people living in that society. The materialist argument highlights the need for an equitable distribution of public and private resources in such a way so as to have the most impact on reducing health inequalities and improving public health (Lynch et al. 2000). No matter the levels, inequalities in health have been consistently found to be associated with material factors, irrespective of the particular measure of inequality applied.

The application of the political economy approach to the analysis of health and healthcare dates back to the 1960s and 1970s with the emergence of studies on the political economy of health. This resulted from the criticism of the lifestyles theories which emphasised the individual's responsibility in either choosing or not choosing a healthy lifestyle. The political economy analysis focuses on analysing and addressing the economic and political determinants of health and disease, including the structural barriers to people living and accessing healthy lives. Thus, the political economy approach provides a sound theoretical basis on which inequities in health in the context of political reforms may be effectively analysed.

The study of the socioeconomic health inequalities in the global health arena has led to a significant number of researchers applying the political economy approach to the analysis of health. Numerous public health researchers are currently focusing on examining the political nature of health and the prospects of clarifying the role of politics in health and its impact on health have never seemed brighter. Studies by

researchers such as Borrell et al. (2007), Navarro (2000), Bhalotra et al. (2013), Callaghan (2011), Koivusalo (1999), Freeman (2000), Bambra, Fox and Scott-Samuel (2005), Navarro et al. (2006) and Hofrichter (2003) have all explored the links between forms of government and health outcomes using variables such as infant mortality and general mortality. It is important to note that the political economy approach focuses on the interactions between the political and economic processes in society, thus examining the distribution of power between different groups and individuals and the processes that affect these relationships (Collinson 2003, p.3).

The global neoliberal paradigm at the very basic level asserts that free market policies produce the economic growth that forms the foundations of human and societal wellbeing. It is anticipated that a political economy analysis positioned within the materialism paradigm will provide an appropriate framework for the analysis of health inequities within the context of political decentralisation. In applying this explanation to health inequities in a decentralised system, it is argued that inequities in health are the outcomes of inequalities in the socioeconomic and political conditions of both individuals and districts. The materialistic view perceives that ideas have torchbearers with resources, who will carry these ideas and translate them into actions and policies. To the materialist the type of society to which the individual belongs shapes, enables and constrains everything within that society (Lohan 2007). Thus, the materialist model identifies the importance of poverty, work and deprivation in its various forms in both the home and the immediate environment with regard to health and health inequalities (Lohan 2007; Bartley 2004).

According to Bartley (2004, p.16), both the political processes and the distribution of power affect the provision of services, the quality of the physical environment and social relationships. By implication then, access to and the provision of health facilities and services will be biased in favour of those groups and individuals who wield the greatest power and authority in respect of influencing policies and programmes. Accordingly, the political economy approach to the analysis of health

inequalities provides the means with which to analyse the contextual effect on health inequalities as it relates to the broader political, cultural, or institutional context, thus providing a way of investigating health inequities.

The political economy approach makes it possible to assess the effect of the economic policies and public programmes of support on health and health inequalities. Thus, a political economy analysis enables a close examination of the role played by changes in the political environment in health inequalities. This is crucial as the political processes within a society affect the distribution of power as well as access to services, assets and resources (Bartley 2004). This is of extreme importance as the line between inequalities in health and inequalities in the broader circumstances of people's lives are sometimes blurred (Graham 2007). Graham (2007) asserts that inequalities in people's health are intimately and inextricably connected to inequalities in both their material and their social circumstances.
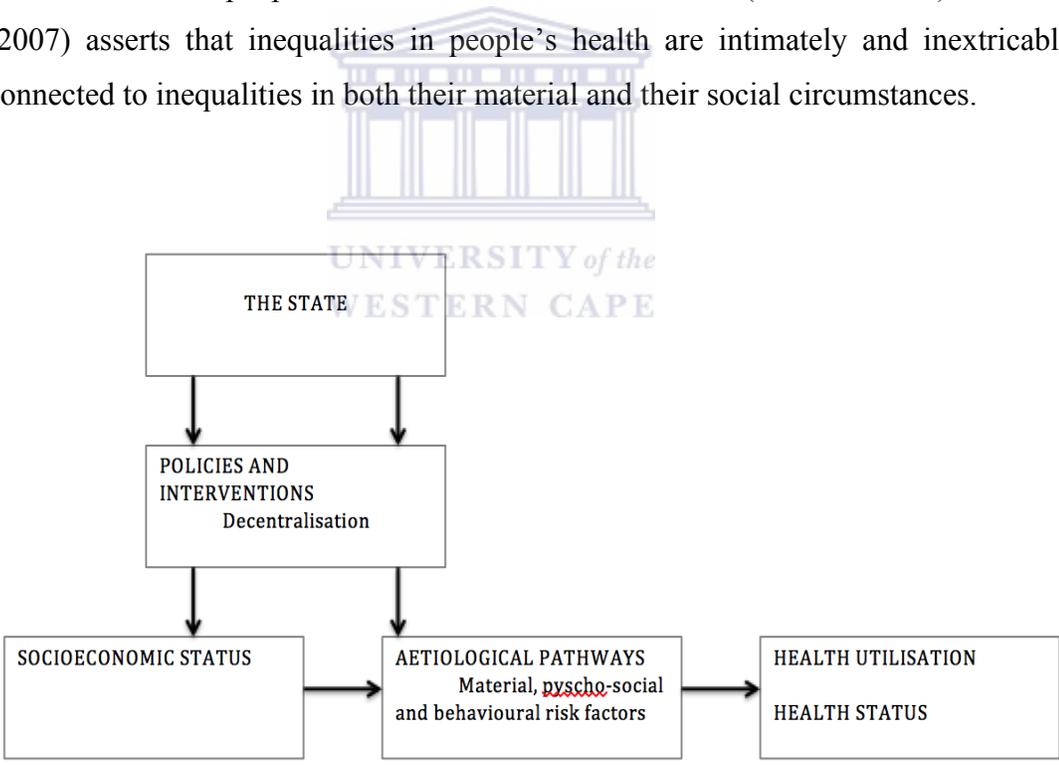
Figure 3.1: A framework for analysing health inequalities

Based on the arguments presented in preceding paragraphs, an appropriate model for analysing inequality in a decentralised system will explore both the supply and the

demand sides of the health system. This will be achieved by examining both the influences of the decentralised system and structures on the environment and context within which individuals seek health and also the effect of the decentralised system on the provision of services to the end users. The materialist/neo-materialist model claims that decentralisation influences inequities through two channels, namely, the influence on the individual's tangible material goods and conditions (including food, housing, access to amenities) and the influence on the material environment of the society (district) as a whole and the ability of the society (district) to invest in and contribute to policy in the areas of health and social care. Figure 3.1 illustrates the translation of decentralisation reforms into health status and health care utilisation.

Thus, this study analyses the national and local institutions within which the health sector operates. This includes the way in which these institutions affect the inputs into and processes in the health systems that exist within a decentralised structure. In order to effectively analyse the effect of decentralisation on inequities in health the study analyses the effect of decentralisation on the individual's utilisation of the maternal health services by conducting an inequality analysis on available household data as the process of decentralisation intensifies. The thesis then analyses the way in which decentralisation may affect inequity within the health system by assessing the indirect effects of decentralisation on the individual's utilisation of health care and also the effect of decentralisation on utilisation inequity using the perspectives of policy makers in both the health care system and the decentralised system.

3.5   Measuring Health Inequality

After examining the concepts of inequity and inequality it is important to understand exactly how these operationalisations may be applied in this study. Accordingly, this section identifies and outlines techniques that have been used to study inequalities. The section also contains empirical illustrations of how this has been previously applied in the area of health inequalities.

3.5.1 Techniques for Measuring Inequality in Health

A number of techniques (McKay 2002) including the range, Gini coefficient, pseudo-Gini coefficient, index of dissimilarity, between group variance, slope index of inequality, general entropy measures such as the Theil's index and the Atkinson's index and also the concentration index have been cited in existing literature as for measuring socioeconomic inequalities in health (Manor et al. 1997). The majority of these techniques have been adapted from the field of economics and subsequently applied to the study of health inequalities. There are also a number of techniques that provide a simpler approach to measuring inequalities such as the odds ratio and the range, which rely on information from two socioeconomic groups only (ibid). The major challenge for the majority of these indicators in their application for the purposes of this thesis is their inability to be decomposed.

In view of the fact that the focus of this thesis implies that, in selecting an appropriate index for the measurement of inequality, such index must be sufficiently complex to allow for other operations, the most important of which is decomposability. The ability to decompose the selected index will allow the effect of decentralisation on both within group and between group inequalities to be investigated. The aim of the study restricts the choices of index to those indices that provide population-weighted summaries of the imbalance between the share of the population and the share of ill-health and that are decomposable, as this will enable an investigation into the effect of decentralisation on the existence and persistence of health inequities. Accordingly, this section will focus on indices that have been widely used in the field of health inequality measurements and which are decomposable, namely, the concentration index and the class of generalised entropy measures for inequality measurement.

The concentration index (CI) has been widely applied in health inequality measurement. The main advantages of the CI include the fact that it takes into account the entire range of socioeconomic groups within a population while it is also

able to measure both relative and absolute inequalities in health despite the fact that it is known primarily as a measure of relative inequality. The CI is also decomposable into its constituent parts mathematically as a linear combination of the concentration indices of its determinants (Harper & Lynch 2007). The two most important disadvantages of the CI include the fact that the index is useable with ordinal measures of social grouping only and is not sensitive to changes in socioeconomic status that do not affect socioeconomic rankings. This, in turn, implies that a change in an individual's socioeconomic status, for example, income, consumption or wealth, which is insufficient to change the individual's position on the ordinal ranking on the socioeconomic scale, will go undetected. In addition, when the CI is decomposed it leaves behind a relatively large error term, which may be larger than one of the constituents. This means that the portion of unexplainable inequality may outstrip both within group and between group elements of the index.

The class of Generalised Entropy inequality measures are characterised by additive decomposability. This, in turn, means that total inequality may be completely decomposed into its component parts within and between any arbitrarily defined population subgroups. Common GE measures include the Theil's T and Theil's L measures, the mean logarithmic deviation, half the square of the coefficient of variation and Atkinson (1970) measure of inequality. Of the two Theil's indices, the Theil's L measure provides a better decomposition as the within group component represents the value of the total Theil's index when all between group differences in the variable of interest are suppressed, unlike the T measure. This may be explained by the fact that the T index uses shares of the variable of interest of the subgroups as weights while the L measure uses population shares.

3.5.2 Empirical Illustrations of Techniques

Three types of decompositions have been applied to the concentration index, namely, decomposition into the determinant of the index, decomposition of the changes in the index and, finally, a geographic decomposition of the index.

Wagstaff (2003) illustrated both the decomposition of the CI into its determinants and a decomposition of the changes in the index using data from Vietnam on child malnutrition.

The approach used (Wagstaff 2003) couples the concentration curve with a regression framework. The approach first estimates the inequality of the health related variable by the socioeconomic variable of interest (income or education), then plots the cumulative proportions of the health variable on the vertical axis against the cumulative proportions of the socioeconomic variable on the horizontal axis in order to attain the concentration curve and, by extension, the concentration index, which is twice the area between the 45 degree line and the curve.

For the purposes of decomposition, it is supposed that the health variable of interest is linked to a set of determinants by a linear regression model. It is also assumed that everyone in the selected sample faces the same vector coefficients and that changes in the vector coefficients are accompanied by changes in their impact on the health variable. Wagstaff outlined a decomposition technique which combines regression analysis with distributional data. This approach was able to partition the causes of inequality into each of the individual determinants.

In decomposing changes in health inequalities, Wagstaff et al. (2003) outlined the three possible decomposition techniques at this stage as follows: taking a difference of the concentration index, applying Oaxaca style decomposition to the formulation (Oaxaca 1973), and using a differential equation method. This technique may be illustrated by focusing on inequalities in stunting of growth using a child's height for the age variable as a measure of stunting. The choice of this variable is based on the fact that not only does it provide a measure of the depth of malnutrition, but it also enables a linear regression analysis to be conducted on the data.

The CI was computed by ranking the children by per capita household consumption in terms of 1998 prices. The variations in height for age scores were

explained by estimating a linear function of vectors of child level variables (age, age squared and gender), a vector of household level variables (living standards, access to both water and sanitation) and a fixed effect at the commune level of the child. The results revealed that inequalities in malnutrition in Vietnam were primarily the result of both inequalities in household consumption and unobserved community level determinants.

Wagstaff (2005) illustrated the technique used for the geographic decomposition of the concentration curve in studies conducted in both China and Vietnam. This technique provided the opportunity to understand the way in which geographic differences contribute to socioeconomic inequalities in health (Wagstaff 2005; O'Donnell & Wagstaff 2008). Wagstaff focused on income. Closely related to the Gini coefficient the geographic decomposition partitions the concentration index calculated on a full sample into between group index, within group index and a residual (see chapter 4 for detailed discussion)(Wagstaff 2005). In the study conducted in Vietnam, Wagstaff (2005) used data from the 1999 Vietnam Living Standards Survey to assess the extent to which the higher incidence of subsidies among better-off people was the result of the richer provinces providing larger subsidies per capita rather than subsidies disproportionately benefiting the better-off within provinces. Wagstaff (2005) decomposed the concentration indices for both overall subsidies and sector specific subsidies. The results suggested that inequalities in subsidies were attributable primarily to a combination of within-province inequalities and inequality of the provinces' income ranges.

Anand (2010) measured and decomposed health workforce inequality in both China and India. The study applied three inequality indices, namely, Theil's T, Theil's L and the Gini coefficient. The latter is not decomposable. The process of decomposition required the partitioning of the counties into mutually exclusive and collectively exhaustive units and calculating the two separate components of the overall inequality "within group" and "between-group" component that measured inequality as a sole result of variations in health-worker density across groups. This

was made possible by the application of the Theil's indices as they possess an additive property(Anand 2010, pp.319–326; Cowell 2006).

In the application of these measures to China, administrative data from both public and private health facilities was obtained from the Centre for Health Statistics and Information, Ministry of Health. In the case of China the analysis revealed that the overall inter-county inequality in the distribution of all four categories of health worker was extremely high and that there was consistently higher inequality in absolute terms in the distribution of nurses as compared to that of either doctors or health professionals overall.

The proportion of inequality explained by within province differences was 82% or more for all categories of health worker (for both Theil L and Theil T) with nurses demonstrating the highest level of 84 to 85% of overall inter-county inequality. More than four-fifths of the inter-county inequality in the distribution of health workers was explained by within-province inequalities. On the other hand, the case study conducted in India relied on district-level workforce data obtained from the 2001 national population census from the Office of the Registrar General of India. For the four categories of health workers examined, the between state and stratum contributions to overall semi district inequality were between 85% and 90%(Anand 2010).

The study conducted by Anand (2010) concluded by presenting a comparison of the situations of the two countries. However, the current study refrains from doing this for the following two reasons. Firstly, the purpose of reviewing this paper was to illustrate the uses and the benefits of the Theil's general entropy measure and not to compare the two countries and, finally, as indicated by the paper itself, the data provided for the two countries was from different time periods, 2001 and 2005 for India and China respectively.

Goli et al. (2013) sought to explain the pathways of economic inequalities in maternal and child health indicators among the urban population of India. Their

study decomposed a concentration curve using the techniques applied by Wagstaff, and data from the third wave of the National Family Health Survey (NFHS,). The study calculated the relative contribution of socioeconomic factors to inequalities in key maternal and child health indicators such as antenatal check-ups (ANCs), institutional deliveries, proportion of children with complete immunisation, proportion of underweight children, and infant mortality rate (IMR). The results of the decomposition revealed that illiteracy among women and their partners, poor economic status, and mass media exposure were the critical factors contributing to the economic inequalities in maternal and child health indicators.

3.6 Empirical Literature on Decentralisation and Inequity/Inequality in Health

There continues to be much debate on the relation or the effect of decentralisation on social service delivery. Whereas the aims of decentralisation include extensive considerations of efficiency and equity in terms of whether these have been achieved, the specific conditions under which they may be attained remain to be determined. Ultimately, the question as to whether decentralisation leads to more equitable outcomes and a more equitable utilisation of social services in general and health care provision specifically remains largely unanswered, especially in the case of many of the developing countries that have implemented various shades of decentralisation reforms.

A major problem in the empirical literature is the absence of systematic evidence on whether increased participation in decentralised local governance generates better outputs in terms of improvements in the provision and utilisation of health services as well as in education, drinking water and sanitation services for the poor and other marginalised groups. Evidence from Africa, in particular, is lacking (Robinson 2007, p.7, 11). This section reviews empirical evidence on decentralisation and equity in social services in general and in health systems specifically. In order to

ascertain the impact of decentralisation on equity, the section will examine a selection of studies that describe the application of a number of analytical techniques, including the geographic decomposition of health inequities.

Habibi et al. (2001) ran a regression using two indicators of health and educational status on two decentralisation measures. Their study used a panel data set consisting of socio-economic and fiscal indicators for the 23 provinces of Argentina over a 25-year period (1970–1994) to investigate the link between decentralisation and human development outcomes. Decentralisation was measured using two indicators of devolution, namely, the ratio of revenue derived from co-participation, royalties and provincial taxes to total resources and the ratio of locally generated resources to locally controlled resources. The study used a fixed effects model. The study concluded that both the percentage of revenue raised locally and the proportion of controlled revenue over the total had a negative and significant association with infant mortality rates for the panel of Argentinean provinces over the period 1970–1994. In addition, the study established that decentralisation reduced intraregional disparities and increased the levels of human development.

In an the attempt to determine the effects of decentralisation on public health care systems in the Philippines, Schwartz et al. (2002) investigated whether decentralisation led to more extensive health care provision than would otherwise have been the case. They further analysed whether the type of public health care provided are acceptable, and whether local governments are effective in the provision of health care services. Their study systematically examined these issues using data from audited annual expenditures combined with secondary census and demographic survey data for almost 1600 local governments before and after decentralisation in the Philippines. Using a two-stage procedure which first estimated the province and city/municipality expenditure equations by OLS, they determined predicted values for expenditures, and then replaced actual expenditures with predicted expenditures in a third equation. This method corrected for the potentially endogenous allocation of funds to the provision of health care by local governments.

Endogenous variables may have led to incorrect conclusions about causation as the effect of funds allocated by local government may have led to a biased outcome as the funds allocated may not have been exogenous to the health care provision.

The results showed that, despite the fact that local health expenditures and the share of resources allocated to health had increased after decentralisation, local governments had decreased the share of effective public health care services. The study also determined that local expenditures had increased the use of public health services such as immunisations, infectious disease control, health education, family planning, and maternal and child health. In addition, the study revealed that the post devolution per capita health expenditures by local authorities had generally increased the positive impact of these expenditures on the use of health services although analysis had showed that the impact had been stronger on family planning services although positive but weaker on the use of immunisation services.

In a cross-country study that used time series data from 140 low and middle-income countries, Khaleghian (2003) examined the impact of political decentralisation on essential public services. Data on immunisation for two vaccines, measles and whooping cough, was obtained from the WHO and UNICEF. The study sought both to characterise differences in the immunisation coverage between decentralised and non-decentralised countries, controlling for other determinants such as national income and contact with donors; and to examine the effects of the presence of factors such as democracy, illiteracy, institutional quality and ethnic heterogeneity. The study adopted a linear model for decentralisation, in which a binary decentralisation variable and a host of structural or control variables explained the rate of decentralisation in a country at a point. The model was then estimated using the ordinary least square method.

The study concluded that expenditure decentralisation was positively related to improved health outcomes in low-income countries. Specifically, the study revealed that, in the low-income group, the decentralised countries had higher coverage rates

as compared to the centralised countries, with an average difference of 8.5% for the measles and DTP3 vaccines. However, in the middle-income group, the reverse effect was observed with the decentralised countries having lower coverage rates as compared to the centralised countries, with an average difference of 5.2% for the same vaccines. In addition, while in the low-income countries it was observed that development assistance reduced the gains from decentralisation, in the middle-income group democratic government was found to mitigate the negative effects of decentralisation. Decentralisation in the middle-income countries was also found to have reversed the negative effects of ethnic tension and ethno-linguistic fractionalisation although institutional quality and literacy rates were not found to have any interactive effect either way. The results were the same even when decentralisation was measured by either a dichotomous binary variable or with a more detailed measure of fiscal decentralisation.

Robalino, Picazo and Voetberg (2004) investigated the link between fiscal decentralisation and infant mortality using panel data on infant mortality rates, GDP per capita, and the share of public expenditures managed by local governments from low- and high-income countries covering the period 1970–1995. If the channels of influence for fiscal decentralisation on health outcomes are identified as an increase in the levels of allocative and technical efficiency, then a decentralised system is expected to be more successful in allocating scarce resources to alternative interventions in order to maximise health outcomes. Based on the above and also on the assumption that policy makers are not benevolent and have objective functions that respond to political incentives rather than social welfare, Robalino et al. (2004) developed a linear equation which modelled both infant mortality as a log function of an indicator of fiscal decentralisation and structural indicators which related to institutional capacity such as civil rights, political rights, and corruption.

The indicator of fiscal decentralisation used was derived from the World Development Indicators and is computed as the ratio between the total expenditures of local governments and the total expenditures of the central government on the

basis of the Government Financial Statistics. The study then estimated the six models that differed in the vector of structural variables, concluding that countries in which local governments managed a higher share of public expenditures tended to have lower mortality rates with these benefits being more important for poorer countries. The research study further discovered that the positive effects of fiscal decentralisation on infant mortality rates were enhanced in institutional environments characterised by strong political rights and, finally, that it would appear that fiscal decentralisation may be a mechanism with which to improve health outcomes in environments with high levels of corruption. However, Robalino et al. (2001) posited that decentralisation may lead to increases in regional disparities in health expenditures in situations in which there is an absence of a mechanism to transfer resources from rich to poor jurisdictions.

The study conducted by Jimenez and Smith (2005) explored the impact of health care decentralisation on the level of health of a population. They sought to answer the question as to whether a shift towards greater decentralisation was accompanied by improvements in population health. Their analysis drew on a theoretical model of local government's public finance applied to health using the ten provinces of Canada as a case study. The results of the empirical analysis revealed that decentralisation in Canada had had a positive and significant impact on the effectiveness of public policy in improving the population's health.

Uchimura and Jütting (2009) analysed the effect of fiscal decentralisation on health in China by applying panel data analysis to nationwide country level data. The study applied an analytical model linking fiscal decentralisation to health outcomes through a stylised chain of interactions. Uchimura and Jütting (2009) then proceeded to use panel regression analysis techniques to answer the question as to whether decentralisation leads to improved health outcomes and whether transfers from the central government played a facilitatory role. The variables used included a measure of provincial level infant mortality ratios as explained variables and a number of explanatory variables which included a two measures of fiscal decentralisation;

vertical balance (VB) and the ratio of the county's expenditure to total provincial expenditure (RCE) as well as other socioeconomic characteristics that affected health outcomes. The outcomes established that the counties in the more fiscally decentralised provinces had lower infant mortality rates as compared to those counties in which the provincial government remained the main spending authority. However, this occurred only when there were clearly established and functioning fiscal transfer systems and local government fiscal capacity was strengthened.

In an attempt to better understand the effect of decentralisation on district health service from the perspectives of service users and providers in Nepal, Regmi et al. (2010) examined the effect of decentralisation on service delivery. They assessed the decentralisation process in the Ministry of Health in Nepal using a qualitative technique based on social constructionist theory. Using purposive sampling techniques, the researchers conducted a series of in-depth interviews and focus group discussions in four primary health care institutions, capturing service users, providers and other stakeholders. The resultant data was then categorised into groups and analysed using tabulation and graphical techniques. The analysis revealed decentralisation to be positively associated with both increased service access and utilisation and improved service delivery.

Relying on evidence from an anti-poverty programme in Mexico, Bustamante (2010) examined evidence on the effectiveness of centralised and decentralised health care organisations. The study did this by taking advantage of health care provider duplication in rural Mexico. The study also benefited from both differences in the timing and models of health care decentralisation in Mexico and from a quasi-random distribution of providers. A treatment and a comparison group of 320 and 186 individuals respectively were randomly selected from states in Mexico. A regression analysis was then conducted to compare the performance of federal and state providers of health services using private health expenditures and health care utilisation as the dependent variables. The analysis revealed that households served by centralised provider of health services performed better with 56% less regressive,

out-of-pocket health care expenditures and also observed a higher utilisation of preventive services as compared to the situation with decentralised providers of health services. In the areas in which there was a cash transfer programme, which provides cash transfers to poor families conditional upon school attendance and the families receiving preventive care, the state providers outperformed the centralised providers.

Using a decision space analytical approach and an analysis of expenditures and utilisation rates, Bossert et al. (2003) investigated the relationship between decentralisation and the equity of resource allocation in Colombia and Chile in a comparative study. The decision space framework is based on a principal-agent approach in terms of which the ministry of health (or policy maker), as the principal, sets goals and priorities for health policies and programmes and grants permission, authority and resources to local agents, that is, the district offices, regional government to implement in order to realise specific objectives. The study revealed that, under certain conditions and with certain specific policy mechanisms, decentralisation may improve the equity of resource allocation.

In both countries (Chile and Columbia), equitable levels of per capita financial allocations at the municipal level were achieved through the use of allocation formulae, adequate local funding choices and horizontal equity funds. However, the findings on the equity of the utilisation of services were less consistent although they did show that increased levels of funding were associated with increased utilisation. This, in turn, suggests that the improved equity of funding over time may reduce inequities in service utilisation. The study concluded that decentralisation may contribute to, or at least maintain, the equitable allocation of health resources to municipalities with varying incomes.

Rodríguez-Pose and Gill (2004) explored the link between increasing intra-national disparities at the global level and the drive toward devolution in many countries. They used an array of descriptive analytical techniques and correlations to chart the

link between the devolution of power and increased regional disparities. The study included both developed and developing nations. The study acknowledged that it would appear that decentralisation policies are popular throughout the world and that such policies seem to be associated with significant social and political benefits as a result of an awakened local consciousness and increased local economic potential. In addition, devolution may have also increase economic efficiency. Thus, the global trend towards devolution reflects a subtle, but profound, renunciation of the traditional equalisation role of national government in favour of conditions which foster economic and public competition and which lead to the increased development of initially rich and powerful regions to the detriment of the poorer areas.

In an analysis of health sector reforms in Uganda, Okuonzi (2004) observed that decentralisation had led to a widening of disparities in the nature and quality of health care provided. Okuonzi's study involved a systematic review of health sector reforms in Uganda and focused on decentralisation reforms. He noted that the reforms had, in fact, increased inequity as regards access to health and that important health indicators had worsened. He argued that this was primarily because the richer districts and those with powerful local politicians who had been able to persuade nongovernmental organisations to work in their districts had fared better than the other districts which had not been as fortunate.

Wagstaff (2005) uses the concentration curve decomposition to answer the question as to whether income-related inequalities in the health sector were the result of gaps between the poor and less poor areas rather than the differences between poor and less poor people within areas. Wagstaff (2005) conducted two empirical studies to demonstrate these techniques, namely, the case of government subsidies to the health sector in Vietnam and insurance coverage in rural China. In the case of Vietnam it was found that the disproportionate accrual of health subsidies to Vietnam's better off was primarily as a result of the fact that the richer provinces had larger per capita subsidies as compared to the poorer provinces. On the other hand, the pro-rich inequalities in health insurance coverage in rural China were discovered to be mainly

as a result of the fact that the better-off villages had been more successful at preventing the collapse of their insurance schemes as compared to the poorer villages. The cases used household level data from the Vietnam Living standards survey and data from a baseline household survey undertaken as part of the World Bank's health project in China.

Jiménez-Rubio et al. (2008) used the concentration curve decomposition analysis technique applied by Wagstaff (2005) to explore health inequities in a decentralised setting using 2001 Canadian Community Health Survey (CCHS) data. The survey was the first wave of a nationally representative health survey of individuals aged 12 years and over living in Canada. The CCHS provided detailed data on health status, health-care utilisation and other personal characteristics for a sample of 130,880 respondents. Jiménez-Rubio et al. (2008) explored whether income-related inequalities in health and inequities in the use of health care were more likely to be caused by gaps between the rich and poor Canadian provinces rather than the differences between rich and poor individuals within these provinces. The results revealed that within area variation was the most important source of income-related health inequality while income-related inequities in health care use were driven primarily by differences between provinces.

Akramov and Asante (2008) examined the link between decentralisation and local public services in Ghana, seeking to answer the question as to whether geography and ethnic diversity were relevant. The study did this by exploring the disparities in the local public service provision between decentralised districts in Ghana using district and household level data from two major sources, namely, the 2000 Ghana Population and Housing Census and the 2003 Ghana Core Welfare Indicators Questionnaire (CWIQ) Survey.

The study developed an econometric model for analysing the differences between the decentralised districts in terms of local public service provision and based on an analytical framework with insights from (Besley & Coate 2003; Faguet 2004)Besley

and Coate (2003), Faguet (2004); and Ahmad and Brosio (2005). The results showed that districts' geography, defined primarily as the ecological zone (coastal, forest and savannah) and the distance to the regional capital played a major role in shaping disparities as regards the access to local public services in Ghana. The districts located in the coastal and forest zones had better access than those in the savannah areas. It is worth mentioning that distance between the districts and the national capital was not statistically significant. The findings also suggested that ethnic diversity had a significant negative impact on access to local public services, including drinking water. This negative impact was significantly higher in the rural areas. However, the negative impact of ethnic diversity on access to local public services, including drinking water, decreased as the average literacy level increased.

Spain is generally regarded as having a relatively efficient health system at the macro-level. However, Costa-Font and Gil (2009) and Costa-i-Font (2005) explored the effect of decentralisation on inequities in the Spanish health system. In the study Costa-Font (2005) used data from the 1997 Spanish National Health Survey and adopted the concentration index techniques. He found that inequality in health within and between Spanish health services was relatively small and often not even significant. However, when the Catalan region was compared with the regions of the Navarre, Basque Country or Andalusia, the inequalities are found to be significant in the Catalan region. Two regions, Catalonia and Insalud, where private health care predominates, recorded high levels of inequality. The study concluded that devolution in Spain had not led to inter-regional inequalities, except in instances in which the private sector had continued to play a dominant role in the health sector.

In a more recent study, "Exploring the pathways of inequality in health, health care access and financing in decentralized Spain", Costa-Font and Gil (2009) revealed that it would appear that inequalities in health and healthcare in Spain are driven by the prevailing income inequalities. The researchers argued that inequalities in health and health care did not appear to be driven by inequalities in financing and health expenditure. The study pointed out that those states which were politically

responsible for the organisation of healthcare did not exhibit significant differences in health and healthcare inequalities and, in fact, tended to exhibit a better equity performance. The study conducted an empirical analysis and applied the concentration and Gini index analyses of horizontal inequalities to data from the Spanish National Health Survey 2001. The study measured inequalities in three major dimensions, namely, health (outcome), healthcare (access) and healthcare payments (financing).

In a study that developed the techniques applied by Jiménez-Rubio et al. (2008), Zhong (2010) examined the impact of decentralisation of health care administration and inequity in health care access in Canada. In this study, Zhong extended the methods used in previous studies by adopting a perfectly decomposable Theil's index in order to analyse the spatial dimension of inequity. Zhong argued that using the Theil index helped to overcome the challenge involved in the concentration index applied by Jiménez-Rubio et al. (2007), namely that the CI is not completely decomposable and leaves a residual term that is relatively large.

However, the Theil's index is not able to distinguish the socioeconomic gradient of inequity meaning and it is, thus, unclear whether inequities captured by the Theil's index were pro rich or pro poor. In the study Zhong conducted a before and after comparison of a change in the degree of decentralisation in Canada which was defined by the introduction of the Canada Health and Social Transfer (CHST) in 1996/1997. Zhong (2010) aimed to shed further light on the casual relationship between decentralisation and health-related inequity. The CHST had improved the approach to fund transfers from the federal government to the provinces by pooling the funds into a grant block for a number of programmes. The study revealed that the overall inequity in health care utilisation could be explained primarily by variations within provinces in Canada. In addition, the study showed that, after an increase in the intensity of decentralisation, there had been a lower degree of within province inequity in the use of general practitioners and hospital services as well as a

lower degree of between province inequity in the use of general practitioners (GP), medical specialists, and hospital services.

3.7   Appraisal of the Literature

There were two categories of empirical literature reviewed above, namely, literature on decentralisation and health systems and literature on decentralisation and inequality/inequity in health. The studies on the effect of decentralisation on health service provision tended to reveal a general positive impact (Habibi et al. 2001; Khaleghian 2004; Robalino et al. 2004; Jimenez & Smith 2005; Uchimura & Jütting 2009) while the study which Bustamante (2010) conducted in Mexico found that centralised health services had reported better outcomes than the decentralised health services. However, the focus of the majority of these studies was relatively narrow as they tended to focus on the measure of decentralisation and in the main they relied on some measure of fiscal decentralisation. While Habibi et al. (2001) focused on revenues, Schwartz et al. (2002) measured expenditure shares. In operationalising and measuring decentralisation quantitatively Robalino et al. (2001; Jiménez-Rubio et al. (2008) and Uchimura and Jütting (2009) all focused narrowly on an examination of fiscal decentralisation.

The application of such an approach which focuses on fiscal aspects of decentralisation to the Ghanaian context may prove challenging as it has already been documented that fiscal decentralisation lags behind other forms of decentralisation in Ghana (Ahwoi 2010; Crawford 2004). Khaleghian (2004) applied a measure of fiscal decentralisation to a dichotomous measure of decentralisation in a cross-country analysis. However, this would be difficult to apply in the context of a single country if decentralisation has been rolled out to all jurisdictions at the same time as was the case of Ghana. Thus, in order to conduct a comprehensive examination of the impact of decentralisation in the Ghanaian context, the effect measure used would have to go beyond a measure of fiscal decentralisation.

As regards decentralisation and equity the results from the studies reviewed offered a mixed picture and the approaches used were equally varied. A few of the researchers had relied solely on a single decentralisation measures as some studies had examined the effect of devolution while others had also examined fiscal decentralisation. In examining the effect of decentralisation on inequalities a number of the papers reviewed had used inequality index techniques. However, not one of these studies had been conducted in the developing country context. The study on Uganda by Okuonzi (2004) had used a literature review approach while Akramov and Asante (2008) had applied a regression technique. The studies on inequalities and inequities tended to focus heavily on quantitative analysis techniques, thus often missing a more nuanced analysis of the country context. This, in turn, has resulted in a problem in distinguishing between the effects on inequity of various reforms that were implemented at the same time as decentralisation in the health sector as it is often the case that decentralisation is implemented together with other reforms such as user fees and health insurance. The above arguments provide a rationale for the decision to combine methods for the purposes of this study.

3.8 Chapter Summary

The chapter is divided into two sections. The first section examined the concepts of health equity and health inequality and discussed techniques which could be used to measured and illustrate these concepts while the second section examined the issues of decentralisation and health, providing empirical evidence on the links between the two.

In understanding the issue of health inequity and inequality the chapter reached the conclusion that, despite the fact that, in terms of both achievement and in distribution, health inequality is a good indicator of inequities, the scope of health inequities is far wider and has embedded in it issues of a social, economic and also political nature. Thus, an examination of health inequities which focuses solely inequalities fails to address the issue comprehensively as it is not possible to judge

the violation of health equity merely by investigating inequality in health (Sen 2002; Whitehead 1991). Accordingly, it is essential that any attempt to promote health care and examine health inequity must happen at all levels, including the allocation of resources to health care and the distributive arrangements within the health care system.

Despite the fact that this does not, in any way, undermine the importance of examining health inequality when addressing the issue of health inequity, there is little doubt that the far broader concept studies on health inequities should be extended beyond just the examination of inequality. Health inequality is definitely a sine qua non in any critical examination of health inequity as inequity is a concept of multiple dimensions. In order to borrow from (Sen 2002)again in concluding this issue, health inequity is an immensely rich concept and there should be no attempt to narrow the domain arbitrarily. Accordingly, a thorough examination of health equity may require the application of a general and more inclusive framework meshed with certain special formulae that have been deemed appropriate.

This, in turn, justifies both the decision to use the political economy approach for the purposes of this study as well as the decision to go beyond the quantitative analysis of health inequalities and inequities to examine the deeper economic, social and political genesis, thus exploring broader solutions to the combating of inequities.

The chapter also contained a discussion of the techniques used to measure and decompose health inequality. It chapter revealed that there are several methods available for measuring health inequality, each with their accompanying strengths and weaknesses (Manor et al. 1997). It is, therefore, important to ensure both the usability and suitability of a selected index.

The chapter then used examples to establish that the two major types of indices make possible the level of decomposition as required by a study of this nature. These two major types of indices include the generalised entropy class of indices and the concentration index, which has been widely used in the area of health inequality

measurement (O'Donnell & Wagstaff 2008). This is primarily as a result of the fact that these indices satisfy a number of the preconditions required for an index to be decomposed. Of the two, the chapter showed that, in view of its additive nature, the generalised entropy index is completely decomposable into its constituent parts and, thus, is the best alternative for a decomposition analysis of health inequality. Its ability to show data unavailability may best suit the purposes of this study.

The second section of the literature review focused on studies that provided evidence on the link between decentralisation and health outcomes. These studies provided evidence of the fact that, in most instances, decentralisation, whether in low or middle income countries, has had a positive effect on health outcomes and that decentralisation has been shown to have a positive relationship with a number of health outcome variables. The variables examined included, but were not limited to; infant mortality, malnutrition, immunisation and utilisation of preventive healthcare services.

As regards the effect of decentralisation on regional disparities in health care, the evidence provided was generally imprecise although some studies attributed such inequities to be primarily the result differences between regions (inter regional variations) while other studies (Jiménez-Rubio et al. 2007; Zhong 2009) revealed that intra regional variations best explained the inequalities in the health variables. Fiscal decentralisation was found to be especially important in this regard. Wagstaff (2005) pointed out the role of endowed regions in the differences in health and health care observed. The literature also revealed a significant lack of studies conducted in the context of developing nations, especially in Africa.

In conclusion, the chapter lays the foundation for this study by conceptualising health inequalities and inequities and by outlining techniques which may be used to analyse such health inequalities and inequities. After an examination of relevant empirical literature the chapter then discussed the existing gap in the literature in the areas of decentralisation and health inequities. This, in turn, forms the basis for the

specification of the methods and techniques which may be used to address this gap and as contained in the following chapter.

Chapter 4

Methodology and Econometric Model

4.1 Introduction

This chapter outlines the methodological issues which were pertinent in this research study, specifically the research objectives of the study, analysis techniques, econometric model specification, sources of data, selection of variables, and the statistical instruments used. The chapter also contains a summary profile of the country selected as well as a description of the selected districts in order to contextualise the discussions that follow in Chapters 5, 6 and 7. The chapter also discusses the fieldwork processes followed in the study, explaining the procedures that were used to gather the data used in the analysis of the research problem. The chapter then proceeds to describe the objectives of the study; and the specific techniques which were used to realise these objectives. The chapter concludes with a critical examination of the techniques used to ensure the accuracy of the data gathered and a discussion of ethical issues raised and how these ethical issues were addressed in the study.

4.2 Research Design

The success of a research project depends heavily on the accuracy and relevance of the research design applied. If the research design is accurately specified this ensures that the evidence obtained from the research studies answers the research questions posed in an unambiguous manner (De Vaus 2001; 2002). Typically, the research design stipulates the specifications of the types of data or evidence required to answer the research questions, test a theory, evaluate a programme or describe a phenomenon. Research designs are intended to deal with logical problems rather than logistical problems (Yin 1989; 2009). This, in turn, means that the research design is expected to provide a systematic and coherent means of realising the research objectives. For this to be possible the research design should be well

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specified before actual research commences as a poor specification of design in early stages of a study may lead to weak and erroneous conclusions. Research designs are often confused with research methods. The clear distinction between the two is that a research design provides a logical structure to the inquiry whereas the research method often presents and outlines the means by which data is collected. However, the process of collecting data is often irrelevant to the logic of the research design (De Vaus 2002).

Traditionally two distinct research cultures – qualitative and quantitative research techniques – have been applied to social science research. These two are differentiated by their respective assumptions, methods and philosophical orientations (Johnson & Onwuegbuzie 2004). The proponents of these two research paradigms have often engaged in fervent dispute. While the proponents of the quantitative school believe that social observations should be treated as entities, in much the same way that physical scientists treat physical phenomena and maintain observation, they also maintain that social science inquiry should be objective. In other words, time- and context-free generalisations (Nagel 1989) are both desirable and possible and it is possible to determine the real causes of social scientific outcomes in a reliable and valid way.

On the other hand, the proponents of the qualitative methods reject what they perceive to be positivism. Positivism is based on the view that knowledge in research should be gained from the 'positive' verification of observable experience and present a number of arguments in favour of the superiority of their techniques and approach (Smith 1983; Guba & Lincoln 1994; 2001). The proponents of the qualitative methods argue that it is not possible to ignore the context and time of reality as reality is socially constructed and, therefore, generalisation is not desirable. The interpretivists argue that reflexivity in research is impossible as logic flows from the specific to the general and it is not possible to separate the subject of a study from the response. The qualitative proponents believe that research should be characterised by detailed, rich and in-depth descriptions of what is being studied.

However, the traditionalists of both the quantitative and the qualitative paradigms advocate the incompatibility thesis (Howe 1988), arguing that the qualitative and quantitative research paradigms and their associated methods may not be used jointly. However, more recently there has been an increase in the use of mixed methods research designs (Johnson & Onwuegbuzie 2004; Onwuegbuzie et al. 2009; Creswell & Clark 2007; Ivankova et al. 2006; Maxwell & Loomis 2003). The goal of mixed methods research is not to replace either the qualitative or the quantitative approaches but to maximise the benefits and minimise the weaknesses of these two paradigms either in a single study or across a number of studies (Maxwell & Loomis 2003; Creswell 2014; Johnson & Onwuegbuzie 2004; Creswell & Clark 2007; Onwuegbuzie et al. 2009).

The majority of the mixed methods designs are developed from a combination of qualitative and quantitative research methodologies within and across the various stages of the research process. However, it is essential that researchers working in the arena of mixed methods research choose which combination of techniques to use and also create more complex models or combinations that address the specific need. In other words, the basic tenet of the mixed methods approach is that the researcher creates a design that effectively answers his/her research questions (Onwuegbuzie et al. 2009). By definition and by scope research problems and research questions may fit into one or more research paradigms. Creswell & Clark (2007), for example, argues that qualitative research methods are better suited to exploratory studies in new topic areas or areas in which existing theories are limited in the extent to which they are able to explain a problem.

The rational for combining methods in this study was threefold. Firstly it was believed that the mixed methods approach would provide a broader understanding of the research problem than either the qualitative or quantitative technique alone (Teddlie & Tashakkori 2011). The exploratory nature of qualitative research means that the qualitative approach provides the only viable means to answer the questions of *why, how* and so *what* posed in the research problem (Weaver-Hightower 2013).

Thus, in order to understand the effect of decentralisation on inequities in health is it important to rely on both data and the perspectives of "experts in the sector". However, this approach is supported by the inadequacy of the quantitative data available on decentralisation in the Ghanaian context and the need for a mixed method approach to the study is even more necessary in view of the fact that, despite the years of decentralisation, there is insufficient data at the district and regional levels to analyse the research issues satisfactorily. The two techniques were also intended to be complementary, thereby enriching the study with the extensive information gathered from in-depth data obtained from the semi-structured interviews. The two techniques were also applied for the purposes of triangulation. This was especially necessary in view of the gaps in the data as well as the nature of the data available on the decentralisation process. In addition, the nature of the research questions made it impossible to analyse the issue of health inequities conclusively using either a quantitative technique or a qualitative technique. Ultimately, qualitative and quantitative methods are often more powerful when combined at different levels and in different sequences.

The research was generally positioned within a combined strategy of concurrent triangulation and concurrent nested strategy, owing to the suitability of this combination. As both of these strategies permit both quantitative and qualitative data to be gathered simultaneously in one data collection phase (Creswell & Clark 2007; Ivankova et al. 2006). Elements of concurrent triangulation are seen when the two main data sources are used to address the same research question, thus allowing researcher to triangulate or to verify the outcomes of one approach using the other approach. The concurrent nested approach provided a means of complementing the inadequate quantitative data with data from the interviews. In contrast to the concurrent triangulation technique, which accords equal weight and priority to the two methods (qualitative and quantitative), in the nested approach one method is nested within the other.

The main advantage of the nested approach is that each of these methods may be used to address a unique set of research questions, whereas, in terms of the triangulation method, the same question is addressed using the two methods for the purpose of corroborating the results. There are sometimes difficulties in embracing any of these paradigms wholly as the requirement of triangulation to address the research questions with both qualitative and quantitative data may prove restrictive while the nested approach requires that the data collected from the two methods must be mixed during the analysis phase and this often is impossible in view of the wide differences in the procedures used for the data analysis. Combining methods allows the use of one method for the purpose of verifying or refuting the results of the other. For example, qualitative investigation may be used to triangulate survey results and to explain relationships/trends/patterns emerging from the survey (Garbarino & Holland 2009; Beall & Piron 2005). These factors motivated researcher to agree with Onwuegbuzie et al. (2009) when they argue that researchers working in the domain of mixed methods research should be able either to create or to choose the iteration that best answers their research questions. This study used qualitative research to enrich the analysis of relationships, trends and patterns that emerged from the analysis of the survey data.

4.3   Research Methods

This study incorporated a mixed methods approach and comprised two stages: 1) a quantitative analysis of the survey data and 2) a qualitative analysis of the information gathered from the semi-structured interviews. The study also adopted a concurrent mixed methods approach to ensure the dual goals of complementarity and triangulation.

The first stage of the study comprised a combined analysis of the quantitative data gathered on the districts and an econometric analysis of the household level data pertaining to health inequities that were exhibited within and across regions. This

analysis involved applying concentration curves and concentration indices analysis in order to illustrate the health inequities in Ghana. The concentration indices were then decomposed to determine the magnitude of the inequities that may be attributed to inter- as opposed to intra- regional disparities. The quantitative analysis also included a descriptive analysis of the district level variables and indicators.

The second stage comprised a qualitative analysis using the primary data gathered from the semi-structured interviews. The aim of this procedure was to conduct an analysis of the decentralisation process in Ghana, focusing on the decentralisation process in the health sector and analysing both the effect of decentralisation on inequities and the sources of health inequities in Ghana. The process also relied heavily on descriptive analysis techniques. In addition, the analysis also made use of archival data and records with an extensive review of both pre and post decentralisation data and documents.

4.4   The Study Area

The aim of the discussion of the study area is to provide a detailed contextual picture of for the setting of the thesis. The dualistic nature of the study implied that a discussion of the study area should not focus on Ghana as a country only but also include a detailed examination of the selected districts. Accordingly, this section describes the socio-economic context of Ghana, touching on issues such as demographic and spatial characteristics, economic history and an analysis of poverty and social indicators with a specific focus on health. An examination of the nature and characteristics of the districts studied, exploring the socioeconomic indicators which are required to fully understand the context of each district is however provided in Chapter 7.

4.4.1 Ghana's Socioeconomic Context

Ghana is an Anglophone West African country and a former British colony that achieved independence from Great Britain in 1957 – the first sub-Saharan African country to do so. The area of modern-day Ghana was formerly known as the Gold Coast. Although the Gold Coast has been inhabited for several thousands of years, there is little documented prior to the 16th century. The current ethnic profile of the region remains largely the same with minor differences as a result of migrants from neighbouring countries.

With a total landmass of 238,533 sq. km, Ghana is boarded to the south by the Gulf of Guinea and to the north, east and west by its three francophone neighbours, namely, Burkina Faso, Togo and Côte d'Ivoire respectively (Ghana Statistical Service. 2013). Administratively, the country is divided into 10 regions with the national capital, Accra, being situated in the Greater Accra region. There are four domestic airports in the country while the one international airport is situated in the national capital of Accra. The country also has two trading harbours, one in Tema in the Greater Accra region and the second in Takoradi in the Western Region.

The country is broadly defined as covering three ecological zones, namely; coastal forest and savannah. The southern part of the country includes the coastal areas and the majority of the forest areas while the northern part of the country is covered by predominantly savannah vegetation.

Ghana's capital city of Accra is situated in the coastal region with is to the south of the country. This region is known historically for trading and it is economically extremely vibrant. The region hosts three of Ghana's biggest cities; Accra, Kumasi and Takoradi, the only international airport in Accra and the two shipping ports in Tema and Takoradi respectively. Numerous economic migrants from the inland areas of the country go to the region in search of socio-economic opportunities. As an agrarian country and a country that relies heavily on the export of timber and minerals, traditionally Ghana's forest belt has been the economic heart of the

country. The major economic activities in this region are cash and food crop farming while the forest areas of the region are also known for the timber which is a major export commodity and a source of foreign exchange. The country's mineral wealth is also concentrated in the forest belt. Significant numbers of migrants from the savannah regions move to the forest belt in search of seasonal farming jobs and more permanent jobs in the mining areas.

Ghana's savannah region, which extends from the upper middle belt of the country to the northern parts of the country, has been documented as the most socio-economically deprived region in the country. This region is characterised by the highest levels of poverty in the country as well as a low level of education and generally poor physical and social infrastructure (National Development Planning Commission 2010; National Development Planning Commission. 2013; Ghana Statistical Service. 2007). The region is also known for its high level of out migration to other parts of the country in search for better opportunities. Figure 4.1 depicts the study area and the selected districts in relation to the rest of the country.

According to the latest population census figures (2010), the national population is 24.6 million with an average annual growth rate of 2.5% for the last decade (Ghana Statistical Service. 2013). The current gender ratio is 95.2 males per 100 females. Ghana has a young population with approximately 57% of the population being 24 years and younger and an estimated 40% of the population being under 15 years of age (Ghana Statistical Service. 2013). The main religions in the country are Christianity (71.2%), Muslim (17.6%) and traditional African religions (5.2%). The ethnic composition of the country is relatively heterogeneous although the dominant Akan ethnic group constitutes 47.3% of the population, the Mole Dagbani 16.6% and the Ewe, Ga-Dangme, Gurma and Guan ethnic groups 13.9%, 7.4%, 5.7% and 3.7% respectively (ibid).
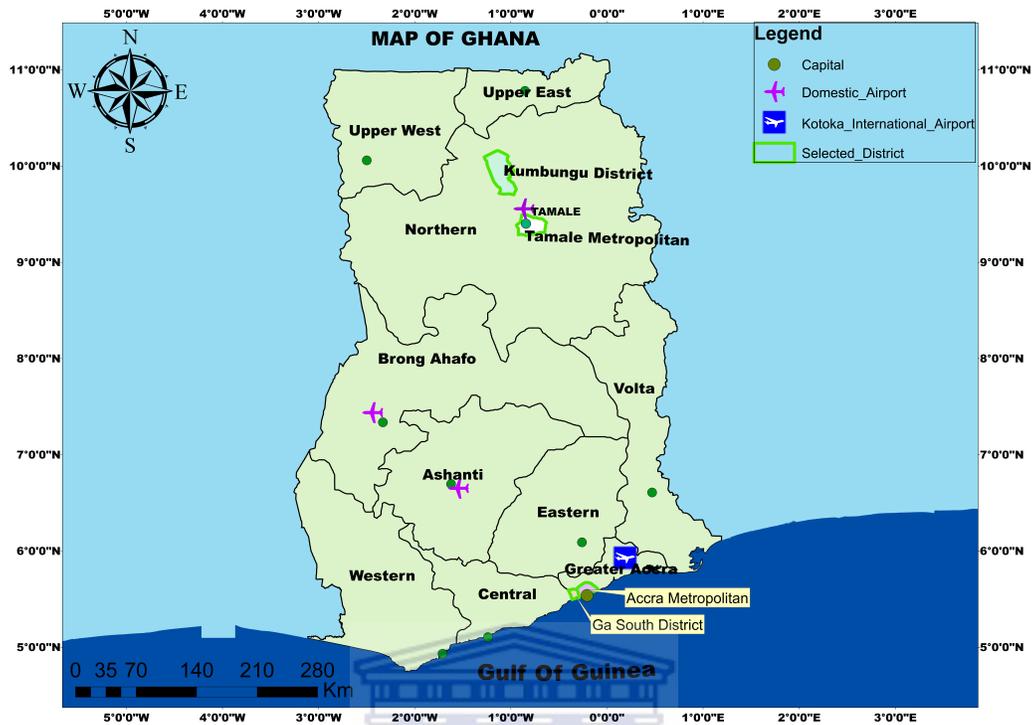
Figure 4.1: **Administrative map of Ghana outlining the study districts (Author's Construct, 2013)**

4.4.1.1 Economic Overview

The economy of the Gold Coast was primarily dependent on trade in gold – a mineral found in several regions in West Africa – and timber. The trade was conducted mainly with European traders. The Portuguese arrived first on the shores of the Gold coast in the late 15th century, followed later by traders from other European countries, including the Dutch, Danes, English and even the Swedes. The gold trade in the 16th and 17th century was followed with the slave trade which was mainly driven by the demand for labour in the Americas. The colonial rule of the British started in the early 19th century. The colonial government developed limited infrastructure to support the trading activities, mainly roads and railroads, and to facilitate the movement of minerals and timber from the inland areas to the coast for export. A shipping harbour at Takoradi was also constructed. In 1878, a Ghanaian

brought cocoa pods into the country, introducing what eventually became the country's major cash crop.

The modern Ghanaian economy may be described as agrarian with a relatively diverse natural resource base. Agriculture contributes more than a third of the national output and remains the largest employer (55%) in the country. Cocoa is the leading cash crop, followed by other more non-traditional crops, mainly horticultural and including oil palm, pineapples, mangoes and citrus fruits. As regards minerals and natural resources the country is heavily depended on the export of gold and timber. Since 2011 crude oil has been included in the country's export products. Other minerals found in limited quantities include diamond, manganese and bauxite[1].

Gold has remained the country's most significant export earner, contributing 48% of revenue in 2012[2] although it is believed that crude oil will overtake gold in the near future (Africa Development Bank 2012; International Monetary Fund 2013). Despite the fact that Ghana has a relatively more advanced industrial sector as compared to other African countries this sector has always lagged behind and has recently been surpassed by the booming services sector. A major challenge to the economy has, however, been the attainment of macroeconomic stability and sustained economic growth (Aryeetey et al. 2002; Aryeetey & Fosu 2003). The country's macroeconomic history has been characterised by volatile GDP growth, large and persistent budget and current account deficits, high inflation and high interest rates.

The immediate post-independence economic strategy combined a rapid, state-led modernisation strategy based on import-substitution industrialisation and a commitment to a wide range of social welfare benefits in the hope of transforming the structure of the economy and ensuring an improved standard of living for the people (Aryeetey & Fosu 2003; Aryeetey et al. 2000). The resultant effect was a high per capita income and a GDP growth rate driven predominantly by cocoa exports. The late 1960s to the early 1980s saw a highly volatile economic performance which

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[1]http://www.gepcghana.com/index.php
[2]http://www.gepcghana.com/gold.php

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was seen to be driven primarily by political instability, poor implementation of domestic policies, intense government interventions, the lack of political will and the oil price shock of the 1970s and 1980s.

This state of affairs culminated in an unprecedented period of economic decline in the early 1980s and, by 1983, the country's GDP was a mere fraction of its value in 1970 and the revenue base of the nation was severely eroded. The government of Ghana, with the support of the International Monetary Fund (IMF) and the World Bank, embarked on an Economic Recovery Programme/Structural Adjustment Programme (ERP/SAP) – the first African country to embark on the SAP (Konadu-Agyemang 2000; Weissman 1990). The economy appeared to respond positively to the ERP/ SAP. It recovered from an average real GDP growth of less than 1% between 1966 and 1983 to an impressive rate of 9% by 1984 (Weissman 1990; Konadu-Agyemang 2000; Aryeetey et al. 2000). This favourable growth continued into the 1990s and, as a result of the efforts, the GDP growth averaged 5%, poverty was reduced and the social indicators improved. However, fiscal challenges persisted through the 1990s and, by the end of the decade, there was still a long agenda of unfinished reforms in the public sector while private sector development continued to lag (Osei 2012; Aryeetey et al. 2000).

4.4.1.2 Poverty Reduction and the MDGs
Ghana had long aspired to attain the global income grouping of middle-income status. Numerous government programmes (Ghana Vision 20-20, the Growth and Poverty Reduction Strategy) over the years have had this as their overall aim and, in 2010, Ghana finally attained a middle-income country status, primarily as a result of rapid economic growth and the GDP rebasing exercise (Moss & Majerowicz, 2012; Ghana Statistical Service, 2003). Figure 4.2 below presents Ghana's GNI per capita as compared to the average of low human development and middle human development countries. The graph shows that Ghana's GNI per capita falls consistently below the average for middle human development countries. Even after attaining middle-income country status Ghana's per capita GNI continued to lag

behind. However, since 1990, the country's GNI has started to outstrip the low human development countries.
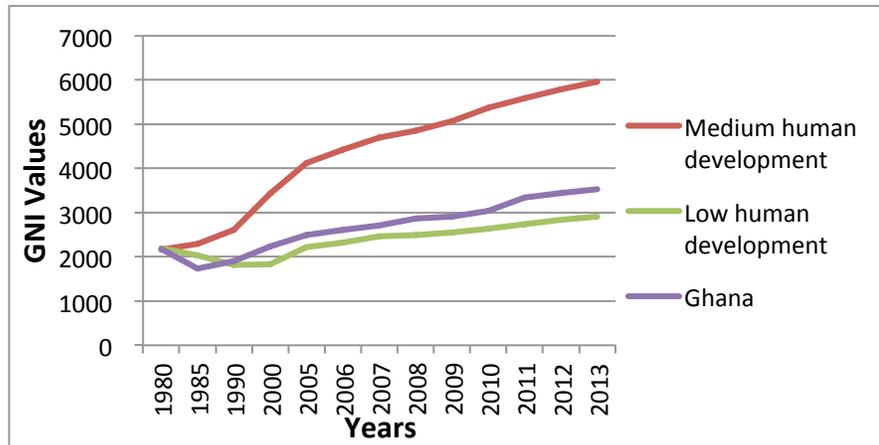
Figure 4.2: GNI per capita in PPP terms (Constant International 2011 International USD)[3]

The economic growth in the country since 1990 has resulted in a significant decline in poverty with the number of people living below poverty line declining over the years from 36.5% in 1992 to 18.2% in 2006 for the lower poverty line and 52% to 29% over the same period for the upper poverty line respectively(Ghana Statistical Service. 2008). However, despite this progress, other multi dimensional poverty indices such as the UNDP Human Development Index and the Human Poverty Index show mixed results. Although index values continue to rise, albeit gradually, it does not appear that the HDI ranking for Ghana is reflecting the gains. However, this may be explained by the fact that other countries' gains are outstripping those of Ghana. According to the 2012 Human Development Index (HDI), Ghana is in the lower half of the medium human development category and ranked 135 out of 187 – the same as the 2011 ranking (Malik 2013; Klugman et al. 2009). Figure 4.3 depicts Ghana's HDI values in comparison to sub-Saharan African countries and to low and middle human development countries. It may be observed that, although Ghana lies above

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[3]HDRO calculations based on data from World Bank (2014), IMF (2014) and UNSD (2014)

both the low human development index grouping and Africa for the period in question, the country continues to lie far below the middle human development category.
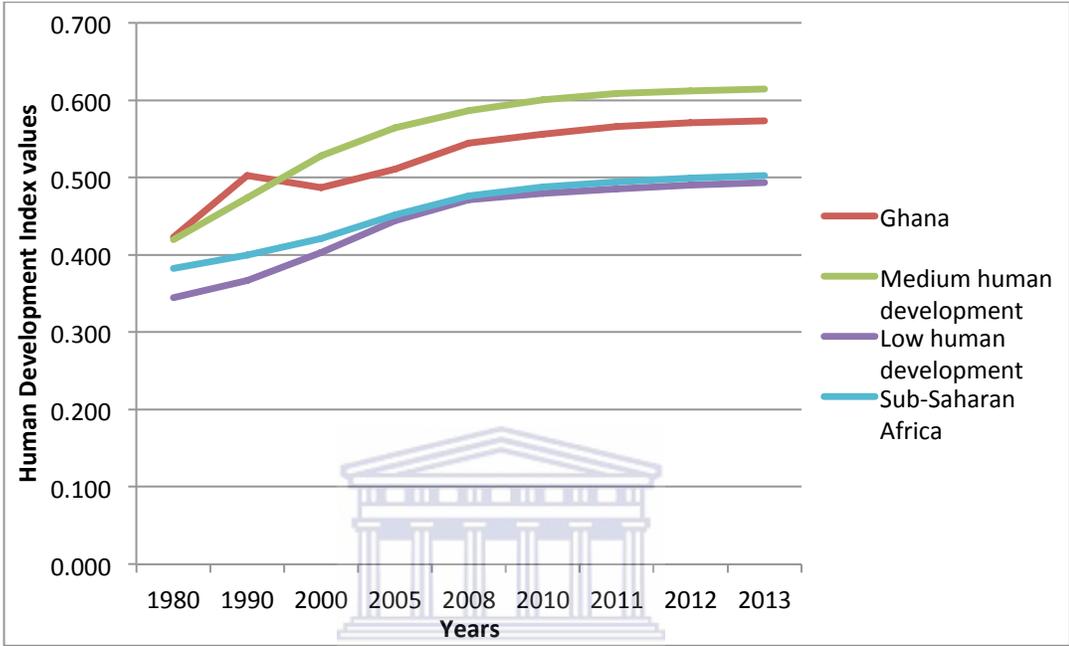
Figure 4.3: Trends in Human Development Index values for 1980 to 2013[4]

Regional and Spatial Patterns of Poverty in Ghana

Despite the general improvement in both poverty and human development at the national level, an examination of regional level data over three periods (1991/92, 1998/99 and 2005/06) reveals that poverty continued to be characterised by significant spatial dimensions. Figure 4.4 illustrates that poverty was disproportionately concentrated in the three northern regions (Upper East, Upper West and Northern regions) of the country, all of which recorded levels above a 50% incidence. Despite the fact that the Upper East region recorded a decline in levels from 1998 to 2005, the data shows that that level was actually higher than the

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1990/1991 levels. In addition, poverty in the Upper West Region actually showed an increase in 2004/2005 over the 1998/1999 levels.
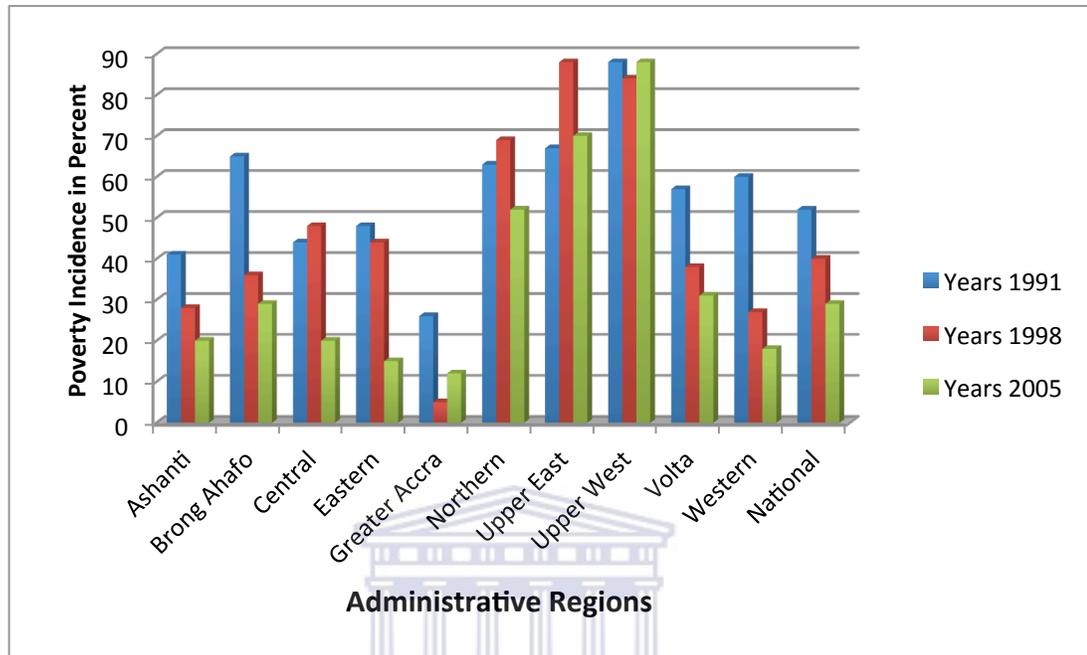
Figure 4.4 Regional and overall trends of poverty incidence in Ghana, 1991/92, 1998/99, and 2005/06[5]

A further investigation into historical trends reveals that the regional nature of poverty is not surprising. Data from 1975 (see Figure 4.5), when the country had nine administrative regions only, reveals a similar pattern to the pattern above.

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[5] Source: Patterns and trends of poverty in Ghana 1991–2006, Ghana Statistical Service
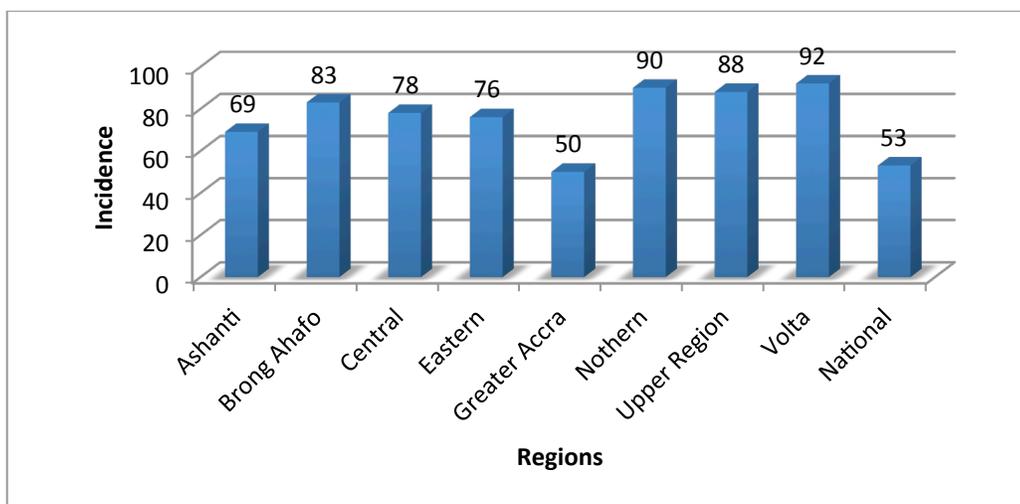
Figure 4.5: Incidence of poverty by administrative regions, Ghana 1975[6]

While the national poverty incidence was 55%, the Northern and the Upper regions (currently Upper West and Upper East) recorded 90% and 88% respectively. The Volta region, which has since seen a significant reduction in poverty levels, recorded a high of 92%.

This trend has been documented by a number of researchers in earlier periods although statistical evidence may appear to be lacking (Boateng et al. 1990). For example, Ewusi (1976) constructed a composite index of development for all the administrative regions in Ghana using data from 1970 and established that Greater Accra was the most developed region. He also pointed out that the Northern and the Upper regions were the least developed regions with index values of less than 10% as compared to the index value of the Greater Accra region. Based on his index, Ewusi (1976) categorised the exiting regions into 4 groups ranging from the least developed to the most developed. This information is presented in Table 4.1.

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[6] Source: Patterns and trends of poverty in Ghana 1991–2006, Ghana Statistical Service and GLSS Report

Table 4.1: Levels of regional development in Ghana, 1970[7]

Development category	Administrative region	Score on index
More developed	Greater Accra	1.000
Developed	Western	0.392
	Central	0.398
Developing	Eastern	0.355
	Ashanti	0.340
	Brong Ahafo	0.265
	Volta	0.306
Less developed	Northern	0.110
	Upper	0.071

Rural areas have consistently recorded much higher levels of poverty than urban centres and, despite the fact that both rural and urban poverty decreased over the years from 85.08% and 53.48% in 1975 to 39.2% and 10.8% in 2005 for rural and urban respectively, this pattern continues to persist. The extent of this rural urban dichotomy in poverty was so significant that Boateng et al. (1990, p.28) described poverty as an "overwhelmingly rural phenomenon". However, more recent reports indicate that the level of urban poverty is on the rise (Ghana Statistical Service. 2013).

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[7] Source: Ewusi, K., 1976. Disparities in levels of regional development in Ghana. *Social indicators research*. Available at: http://link.springer.com/article/10.1007/BF00286164 pages 88 to 89 [Accessed October 6, 2014].
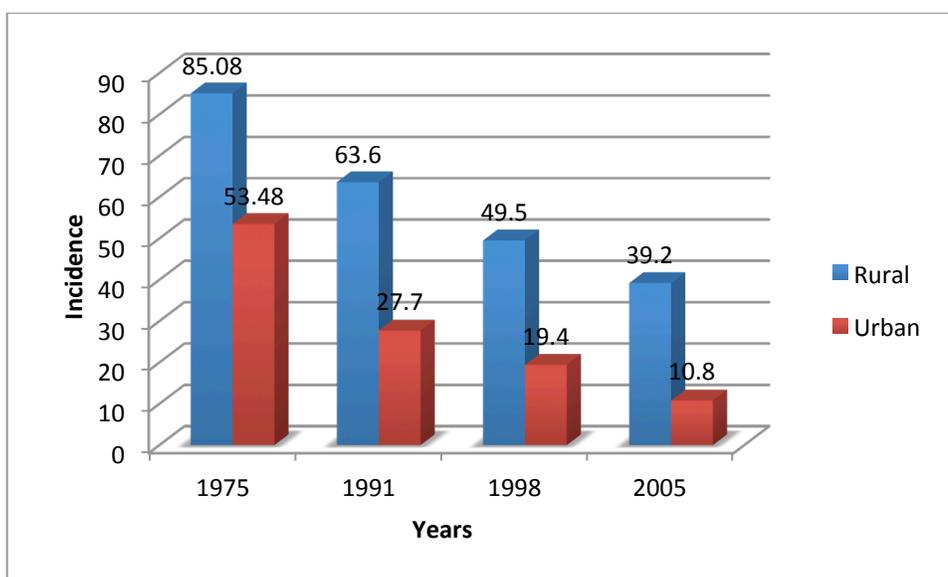
Figure 4.6: Incidence of poverty by location, Ghana 1975 to 2006[8]

With regard to the targets of the Millennium Development Goals (MDGs), which provide brief insights into all the sectoral development goals in Ghana, national reports (United Nations Development Programme and Government of Ghana 2010; National Development Planning Commission 2012; Ghana Health Service. 2011) indicate that the country has made significant progress in achieving these goals. Of the 12 targets couched out of the eight MDG goals on which Ghana reports, 5 have been accessed as probable. These include targets on extreme poverty and hunger, universal basic education, gender disparity in primary and basic education, gender access in secondary education and access to safe drinking water (United Nations Development Programme and Government of Ghana 2010; National Development Planning Commission 2012; National Development Planning Commission 2010) . Three of the targets have been ranked as potentially achievable, namely, halving the population suffering from hunger, halt and reverse the spread of HIV/AIDS and address national debt. Two of the targets have been indicated as unattainable, namely, reducing under-five mortality by two-thirds and maternal mortality by three-quarters (ibid). The report indicates that the two remaining targets, namely, halting

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[8] Source: Patterns and trends of poverty in Ghana 1991–2006, Ghana Statistical Service and GLSS V Report (Ghana Statistical Service. 2008)

and reversing the spread of malaria and environmental sustainability, suffer from a lack of adequate data with which to quantify performance (ibid).

To summarise the report MDG targets in the health sector are proving to be a challenge despite increasing investment. Of the three goals directly linked to health, only the HIV/AIDS goal is on track. Over the last few years the HIV/AIDS prevalence rate has stabilised between 2 and 3% while the prevalence rate for 2012 was 1.37% – an improvement on the 2011 level of 1.46% (National Development Planning Commission, 2013). The main concern is the relatively high prevalence rate of HIV/AIDS amongst the youth. The maternal mortality goal appears to be improving, although only slightly (United Nations Development Programme and Government of Ghana 2010). According to the Ghana Statistical Service (2009), maternal mortality rate was 200 per 100,000 live births – a slight improvement on the 2007 rate of 224 per 100,000 live births (Ghana Statistical Service 2004).

The current figures for maternal mortality institutional measure stand at 155 deaths per 1000 live births – a far cry from the 2015 target of 54 per 1000 live births for the institutional rate – and 451 per 100,000 live births for the survey rate – also far removed from the 2015 target of 185 per 100,000 live births (United Nations Development Programme and Government of Ghana 2010; National Development Planning Commission 2012) . The goal of improving child and infant health showed some improvement with under-five mortality declining from 111 per 1000 live births in 2007 to 80 per 1000 live births in 2008. Infant mortality also experienced a marginal decline from 67 per 1000 in 2003 to 50 per 1000 live births in 2008 (ibid). The reported infant mortality rate of 82 per 1000 live births is still off the targeted 2015 rate of 53 per 1000 live births (ibid).

4.4.1.3 Health Status and Health Inequality
a. Health Status

Despite the poor performance on health related MDGs in general Ghana may, nevertheless, be said to have made progress in health delivery over the years. There

have been gains in the area of health care and policy post-independence. Examples of such gains include the eradication of small pox, consistent improvement in life expectancy and the prevention of a range of communicable diseases such as measles, poliomyelitis, and diphtheria and which has had significant impacts on child survival rates and development over the years. Policy gains include the expansion of the coverage of the health services based on the primary health care approach. Tables 4.2 and 4.3 present selected health indicators for children and adults respectively. For example, in the case of child and infant indicators the data shows that Ghana continues to lag behind its fellow medium human development countries but consistently outperforms the low human development, least developed countries and also sub-Saharan African countries. The indicators on antenatal care coverage and malnutrition even outperform the average for medium human development countries.

Table 4.2: Child and infant health indicators[9]

Country	Infants lacking immunisation[10] 2012		Mortality rates per 1000 live births 2012		Antenatal coverage[11] 2008–2012	Child malnutrition[12] 2008–2012	
	DTP	Measles	Infant	Under-five		Stunting	Overweight
Ghana	8	12	49	72	96.4	22.7	2.6
Medium human development	10	20	37	46	78.7	40.3	5.3
Low human development	18	27	64	94	70.5	39.8	4.2
Sub-Saharan Africa	20	28	64	97	76.9	37.8	4.6

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[9] Source: Compiled from http://www.who.int/countries/gha/en/
[10] Percentage of one-year-olds
[11] Percentage of live births
[12] Percentage of under-five

Least developed countries	10	20	57	84	69.1	41.1	3.8

The adults indicators shows that though male and female mortality rates are high although once again, Ghana outperforms the sub Saharan African average, low human development and low income averages but fall behind the medium human development countries average. The indicator for physician coverage points to a major problem in the availability of physicians as the number is significantly lower for Ghana as compared to all the other categories (Sub Sahara Africa, low human development, low income averages and medium human development countries). Health expenditures commanded 4.8% of GDP, lower than the low human development and the Sub Saharan African average but larger than the medium human development average. Ghana health seekers bear 29.1% of the total health expenditure burden, significantly lower than the medium human development and low-income countries but higher than the sub-Saharan African average – see Table 4.2 for details.

Table 4.3: Adult health indicators[13]

Country/Region	Mortality rate 2011[14]		HIV prevalence 2012	Life expectancy in years 2010[15]		Physicians per 10,000 people 2003–2012[16]	Health expenditure 2011	
	Female	Male	(% aged 15-49)	Female	Male		(Total as % of GDP)	(Out of pocket % of total health expenditure)
Ghana	217	252	1.4	56.1	54.5	0.9	4.8	29.1

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[13]Source: complied from http://www.who.int/countries/gha/en/

[14] Per 1000 people

[15] Health-adjusted years

[16] Per 10,000 people

Medium human development	15 7	230	..	59.5	56.3	7.4	4.6	44.7
Low human development	27 0	313	..	53.0	50.7	2.8	5.2	52.7
Sub-Saharan Africa	32 7	372	..	51.6	49.4	1.8	6.3	27.6

However, the epidemiological situation in Ghana remains unchanged(Ministry of Health 2007) over the last few decades and is characterised primarily by high levels of infectious/communicable diseases, accounting for 62% of morbidity (WHO 2010), although the number of non-communicable diseases is rising steadily (Ministry of Health 2007). The top three leading causes of morbidity in the entire population are malaria (44%), upper respiratory tract infection (7.2%) and diarrhoea (4.3%), with malaria, anaemia and pneumonia being the top three causes of mortality (Ministry of Health 2007). Neonatal causes, malaria and anaemia are the three biggest causes of mortality of children aged under-five, accounting for 32%, 26% and 10% of deaths respectively. However, these levels are lower than the regional averages (WHO 2010).
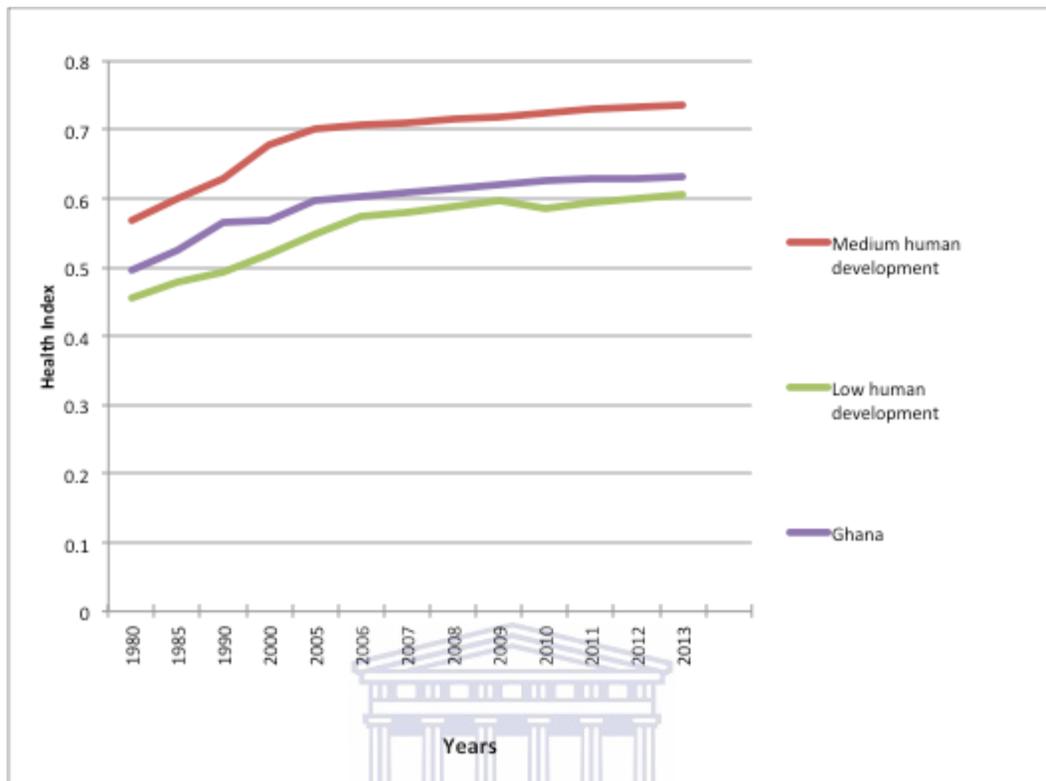
Figure 4.7: Trends in Health Index values for 1980 to 2013[17]

b. Health Equity

General socioeconomic development in Ghana, including health, assumes a similar pattern to the trends exhibited by poverty (see section 4.4.1.2). Konadu-Agyemang (2000); Tsikata & Seini(2004); Langer et al. (2007), attribute the pattern to the spatially biased, developmental agenda of the British colonial administration, concluding that this ensured that socio-economic development was concentrated only in the coastal cities and other cities and towns in the southern area of the country and to the detriment of the northern areas.

Post independence, numerous regimes and governments put in place polices designed to address the massive gap in socioeconomic development between the regions. The establishment of the Savannah Accelerated Development Authority

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[17] HDRO calculations based on data from World Bank (2014), IMF (2014) and UNSD (2014)

(SADA) in 2009 is one example of such a policy. The SADA aims to facilitate the rapid development of the savannah region covering most of Ghana's middle belt to the northern sector (Diverse Solutions Ghana 2014). The overall aim of SADA is to bridge the gap in socioeconomic development between the North and the South. One result of this pattern of socioeconomic deprivation is that the geographical distribution of diseases reinforces the north-south, socio-economic divide which is characteristic of the country (Ministry of Health 2007). Health status also reflects a rural-urban character as, in the main, urban dwellers demonstrate a better health status than the poorer, rural dwellers, although the health status of urban residents has been deteriorating over the years (ibid).

Currently, one of the objectives of the Ministry of Health is to bridge the equity gap in health care and of which geographic equity is an indicator. Two indicators included in this objective are to achieve geographic equity in services as measured by supervised delivery and in resources as measured by the nurse to population ratio.
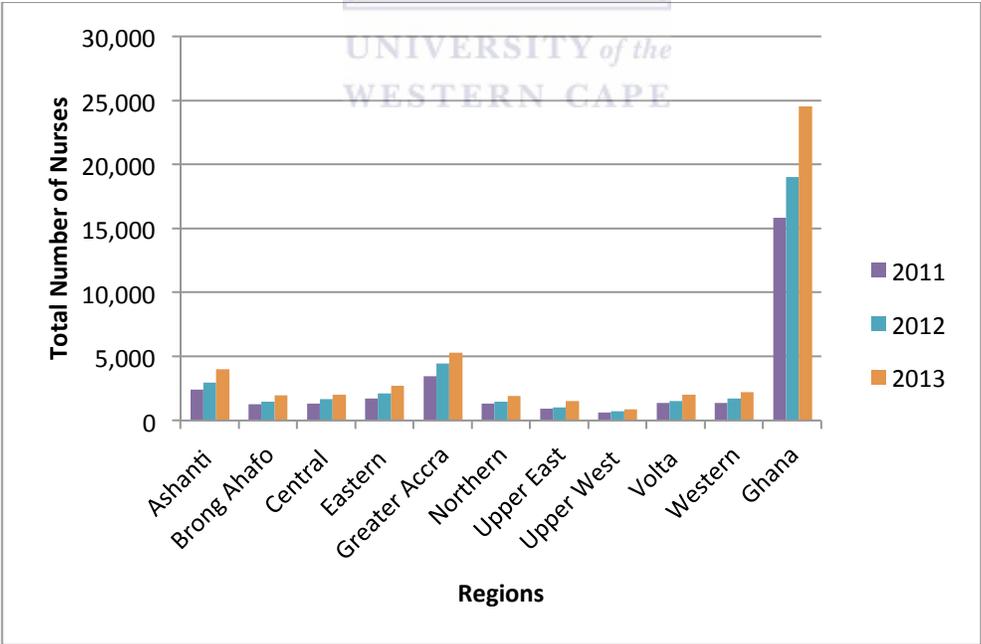
Figure 4.8: Nurse to population ratio[18]

The 2013 assessment of the resource situation indicated that the inequity gap in resources was widening as, although both the resource poor and resource rich regions had improved their nurse to population ratio, the performance of the resource rich regions outstripped that of poorer regions (Ministry of Health 2014). Nevertheless, the assessment also highlighted that the staffing situations in a number of regions, for example, the Upper East region which had the lowest nurse to population ratio in 2007, had improved significantly with a 50% increment in the nurse to population ratio from 2012 to 2013 (Ministry of Health 2014).

As regards the indicator on skilled delivery the national situation had improved. Nevertheless, once again the regional picture showed significant variations with the coverage of skilled delivery decreasing in seven out of the 10 administrative regions.

4.4.2   Study Districts

Four districts were selected for the purposes of the interviews. These districts are all located in the Northern and Greater Accra regions. In the interests of analysing the socioeconomic deprivation to assist policymaking in the country Ghana is often divided geographically into North and South. This is essential to ensure adequate representation of the northern and southern halves of the country as poverty continues to exhibit a spatial character and, higher levels of poverty are recorded in the northern parts of the country (see Figure 4.4). The selection of districts was also informed by the need to ensure that analysis covered assemblies of various population sizes and character. Thus the four districts selected include, metropolitan assembly, a municipal assembly and a district assembly. The selection was also motivated by the need to capture the issues of both rural and urban districts. Finally the study sought to focus on information rich cases by ensuring that districts chosen had been in existence from the beginning of the decentralisation process. Thus, section 7.2 provides a detailed discussion on selected districts; the size of each

district as well as providing a general demographic profile and a brief economic outline for each district. It must be noted that this discussion is, however, limited by the scope and availability of data on the districts.

4.5   Data Collection

The study examined the effect of decentralisation on inequities in Ghana's health sector. The choice of the health sector was informed by a number of factors including the fact that the health sector in Ghana is a relatively large sector in terms of the sectors' share in the national budget and has generally been perceived as a challenge as regards the attainment of both national and also the Millennium Development Goals. The sector was also selected because of the central role of health in both development and poverty reduction. Sen (2002) argues that health is one of the most important conditions of human life and is also a critically significant constituent of human capabilities. It is, thus, essential that it is valued. The selection of a maternal health variable was motivated by the fact that Ghana has under-performed in the health-related development goals, particularly so in maternal and infant health. The maternal health in Ghana has lagged behind most national development indicators with the maternal mortality ratio worsening from a rate of 580 per 100,000 live births in 1990 to 590 per 100,000 in 1995 (National Development Planning Commission 2012). The study thus aims to provide significant insights into policies in address maternal health.

4.5.1   Data Sources

The study relied on three major sources of data which were collected concurrently in Ghana over a four-month period in addition to the GDHS. The data used in the descriptive analysis comprised primary data from the interviews and secondary archival data from records and, finally, data for descriptive analysis at the district level. In addition, the data for the econometric analysis comprised secondary household data from the GDHS.

Several factors determined the choice of the GDHS as the major source of data for the purposes of this study. Firstly, the option of collecting primary data at the household level was abandoned as a result of the high potential for recall bias in respondents. The study required a minimum of two data points and an extensive survey which would have been needed in order to realise the study's research objectives. Secondly, there are a number of household survey datasets available for Ghana[19] from 1992 when decentralisation law was enacted to 2011 when the study started. Thirdly, due to the availability of extensive socioeconomic and health variables within the GDHS the survey is well suited for the purposes of the study as compared to other surveys such as the Ghana Living Standards Survey (GLSS) which contains a limited range of health variables. The GDHS was thus selected due to the availability of the survey for time period that fall within the period of decentralisation and the wide range of health variables. The particular years 2003 and 2008 were chosen mainly due to the fact that the period coincided with an intensification of the decentralisation process in Ghana. Also the 1998 DHS that also fell within the period had variables that did not conform with the 2003 and 2008 which made it impossible to combine. Although the 2003 Core Welfare Indicators Questionnaire Survey (CWIQ) is the only available data which is statistically representative at the district level, it is fairly dated and has been discontinued. The Multiple Indicator Cluster Survey (MICS) tended to be more specific in its objectives and, thus, offered a limited scope of variables. The next sections describe these data sources in detail.

a. Ghana Demographic and Health Survey (GDHS)

The GDHS is a national and regional representative survey of households in Ghana and is designed to provide data with which to monitor the population and health situation in Ghana. Since 1988, there have been five such surveys carried, namely in

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[19]Four rounds of the Ghana Demographic and Health Survey
Two rounds of the Multiple Indicator Cluster Survey
Five rounds of the Ghana living Standards Survey
The 2003 Core Welfare Indicators Questionnaire Survey

1988, 1993, 1998, 2003 and 2008. The information collected in the later surveys provides updated estimates of the basic demographic and health indicators covered in the earlier surveys. This study used the data from the most recent GDHSs carried out in 2003 and in 2008. There are some differences between the 2003 and 2008 GDHS surveys. Firstly, the 2008 GDHS sampled more than 12,000 households in such a manner as to enable separate estimates of key indicators for each of the 10 regions in Ghana, as well as for the urban and rural areas separately.

In contrast, the 2003 survey sampled approximately 6600 households. The survey uses a two stage sampling technique which involves the sampling frame first being stratified into the 10 administrative regions in the country, then into rural and urban enumeration areas (EAs). During the first stage of sampling, sample points or EAs are selected, each with probability proportional to size and based on the number of households. This provides a complete listing of households in all the selected EAs (clusters). During the second stage of selection, the households on the list are systematically sampled.

Households are assigned weights based on cluster, household and individual non-responses to ensure that the representations were not distorted (Ghana Statistical Service 2009; Ghana Statistical Service 2004). In half of the 2008 GDHS sampled households, all women aged 15–49 and all men aged 15–59 were eligible to be interviewed if they were either the residents of the households or visitors present in the households on the night before the survey. However, in 2003, separate questionnaires were administered to all males and females, aged 15–49 and 15–59 respectively, in the households.

i. Questionnaires and Key Variables

The GDHS uses three separate questionnaires to interview households, women and men. The content of these questionnaires is based on both global DHS models and the previous GDHS questionnaires (Ghana Statistical Service 2009). The household questionnaire collects information on all members of and visitors to the selected

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households in addition to general information on the characteristics of the households' dwelling units, including the source of water, type of toilet facilities, materials used for the flooring and roofing of the house, ownership of various durable goods, and ownership and use of mosquito nets (Ghana Statistical Service 2009). The household questionnaire also provides basic information on the characteristics of each person listed, including age, gender, education, and relationship to the head of the household and serves as a means with which to identify the women and men who were eligible for the individual interviews (Ghana Statistical Service 2004).

The questionnaire administered to the women specifically sought details on the following topics: education, residential history, media exposure, reproductive history, knowledge and use of family planning methods, fertility preferences, antenatal and delivery care, breastfeeding, infant and young child feeding practices, vaccinations and childhood illnesses, marriage and sexual activity, woman's work, husband's background characteristics, childhood mortality, awareness and behaviour as regards AIDS and other sexually transmitted infections (STIs), awareness of TB and other health issues, and domestic violence.

b. Semi-structured Interviews

The study used a semi-structured interview technique to collect the requisite data, especially for the purposes of the qualitative analysis. Semi-structured interviews are often used in policy research because they provide a flexible way of gathering the required data while also enabling the researcher to probe further to attain clarity and explore the in-depth views and opinions of the respondents (Barriball & While 1994; Longhurst 2003; Wengraf 2001; Fylan, 2005).

However, semi-structured interviews are also time consuming, expensive and extremely dependent on the competence of the interviewer. Bernard (1988) and Longhurst (2003) argue that the semi-structured interview becomes a useful resource when the interviewer may not have more than one chance to interview a respondent.

The interview guide used in the semi-structured interview technique provides a clear set of instructions for interviewers and may provide reliable, comparable qualitative data.

Accordingly, this study used semi-structured interviews as a complementary method of data collecting to ensure that nuanced data was gathered (Barriball & While 1994; Fylan 2005; Longhurst 2003) . An interview schedule was devised, listing the important issues to be addressed based on the conceptual framework, ranging from more general issues to specific and detailed issues (Fylan 2005). The interview schedule was piloted using a few respondents to ensure the viability of the questionnaire prior to the fieldwork. Pretesting the interview schedule ensures that all unanticipated problems in respect of the questions may be addressed while also ensuring that the interviewees understand the questions and that the questions posed will elicit relevant answers.

c. **Archival Data**

The study used archival data from the records of the District Assemblies Common Fund (DACF) and the districts for the purposes of the descriptive and contextual analysis of the districts. The data from the DACF included data on district revenues, district size and DACF allocations. The study also relied on the data obtained from a number of reports; district medium term plans, annual reports from GHS, district and national annual progress reports, records from the DACF office and the DACF formulae. The data from the DACF report comprised mainly data on district funding and resources and fund disbursements. Table 4.4 presents the various documents used and their respective sources.

Table 4.4: List of administrative and policy documents and national reports

Document	Source
District Assemblies Common Fund Formula	District Assembly Common Fund office
Selected Districts Annual Progress Reports (5)	NDPC/District
Districts Medium Term Plans (4)	NDPC/District
Ministry of Health Annual Progress Reports	Ministry of Health

District Development Fund Report	Ministry of Local Government and Rural Development
2010 Population and Housing Census Report	Ghana Statistical Service
Ghana Health Service Annual Reports	Ghana Health Service
Ghana Demographic and Health Survey Reports	Ghana Statistical Service
Health Sector 5-Year Programme of Work 2002-2006	Ministry of Health
Ghana Shared Growth And Development Agenda (GSGDA)	National Development Planning Commission
Annual Progress Reports (National)	National Development Planning Commission
Consolidated Local Government Bill (2014)	Parliament

4.5.2   Sample Size

The qualitative analysis relied on semi-structured interviews with 20 experts to obtain detailed and information on the research topic (see table 4.5). These experts from varied backgrounds were selected from ministries, departments or agencies (MDA) that work directly within the decentralised health structures in Ghana. Table 4.3 illustrates the number of interviewees from each MDA. The main respondents in the study were at the levels of director and chief director of the selected MDAs.

The Ghana Demographic Health Survey (GDHS) enumeration areas cover all 10 regions in Ghana and 18 out of the original 110 districts that were created at the initiation of the decentralisation process.

4.5.3   Study Participants

The key participants in the study included officials from the decentralised health departments, district assemblies and national departments that interact with both the health sector and the district structures. The specifically the study selected information rich participants directly interact with decentralised health structures and departments. Ghana is divided into ten administrative regions and within each region there7 are a number of districts. The study gathered primary data from two

regions (Greater Accra and Northern) and four districts (two in each region). Although interviewees provided both verbal and written permission to participate in this study, their identities were protected. In addition, the way in which the data analysis was conducted ensured that it would not be possible to identify the respondents.

Table 4.5: Interview participants[20]

MDA	Participants	Unique ID
Ministry of Finance	2	NO1&2
Ministry of Health	3	NO3-05
Ministry of Local Government	3	NO6-08
District Assemblies Common Fund	2	N09&10
District Assemblies Officers	6	DAO 1-8
Ghana Health Service/District Health Directorates Officers	4	DHDO1-4
Total	**20**	

4.5.4 Sampling Method

This study used two different samples: 1) The selection of districts for the econometric analysis and 2) The selection of the districts and participants for the interviews. There have been several changes to Ghana's district boundaries since 1990. For example, in 1990, there were 110 districts. By 2004, the number of districts had increased to 130 before rising to 170 in 2010 while, in 2013 and based on a review of the 2010 population census, the number of districts had increased to 216. For the purposes of quantitative analysis, the study relied on districts surveyed in the GDHS (2008).

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[20] NO – National Officer – Includes all the national level officers interviewed, mainly from Ministries of State and national level institutions such as the District Assemblies Common Fund

DAO (District Assembly Officer) – Refers to individuals working with the devolved districts assemblies

DHO (District Health Officer) – Individuals working with the Ghana health service but at the district health directorate levels within the districts

The study purposively selected the four districts and the interviewees for the purposes of the qualitative analysis. Onwuegbuzie & Collins (2007) and Patton (1990) argue that purposive sampling is useful in situations in which the researcher has limited financial resources and time. This technique is also useful when the researcher is interested in information-rich cases and possesses an extensive understanding of the study area. Thus, the health officials interviewed were "experts" with experience in the specific area of the decentralised health system in Ghana. Two possible disadvantages of purposive sampling include selection bias and non-statistically representativeness. However, the researcher selected cases not based on personal convenience but to ensure that data was available for the selected districts. This was especially important as the boundaries of districts in Ghana have changed a number of times as the number of districts has been increased (see Chapter 5).

4.5.5   Data Collection Summary

Table 4.3 below outlines the data requirements for answering the specific questions posed in the study. The table lists the research questions, provides a summary of the methods which were used to collect the required data and outlines the data analysis techniques that were applied to achieve the research objectives.

Table 4.6: Data requirement for research question 1

To what extent are changes in equity in the utilisation of maternal health services associated with decentralisation?

Research Question	Data requirements / source	Method of data analysis
What is the level of maternal health utilisation and what are the variations in maternal health utilisation across regions?	Household level data from the GDHS	Descriptive analysis of variables
What is the level of maternal health inequities in Ghana across regions?	Household level data from the GDHS and district data	Descriptive analysis of variables and econometric analysis using concentration curve and index analysis
To what extent are the inequities demonstrated a reflection of either inter or intra regional variations?	Household level data from the GDHS	Descriptive analysis of variables and econometric analysis using concentration curve and index analysis
What is the level of inequities in health resources across districts?	Data from District Assembly Common Fund	Analysis using concentration curve and index analysis

Table 4.7: Data requirement for research question 2

What are the factors that influence the equitable utilisation of maternal health services in Ghana's decentralised system?

Research question	Data required/source	Method of data analysis
How has the intensity of decentralisation changed over time?	Archival data and records	Documentary review
What is the level of decentralisation within the health system?	Archival data and records Primary data from semi-structured interviews	Review of decentralisation process and implementation through explanatory analysis.
What were/are the motives for health sector decentralisation in Ghana?	Primary data from semi-structured interviews	Analysis of qualitative data
How has decentralisation impacted on health inequities in Ghana?	Primary data from semi-structured interviews Household level data from the GDHS and district data	Analysis of qualitative data Descriptive analysis of variables and econometric analysis using inequality index analysis
What are the perceived threats to health equities within Ghana's decentralised system?	Archival data and records Primary data from semi-structured interviews	Analysis of qualitative data
What is the prognosis for decentralisation in the Ghanaian health system if it is to positively influence the attainment of sectoral goals and achieve a reduction in inequities?	Archival data and records Primary data from semi-structured interviews	Analysis of qualitative data

4.6   Data Analysis Techniques

Data analysis is the process of coming up with findings from the data collected and requires that the data is organised, scrutinised, selected, described, theorised, interpreted, discussed and presented to audiences. The analysis of the quantitative data made use of STATA for the regression analysis of the household survey data (econometric model specified below), which included an estimation of indirect standardised inequality indices and the derivation of inequality curves. STATA was also used to conduct a simple descriptive analysis through the use of tables, charts and graphs.

The process for analysing qualitative data begins with transcribing, organising and reviewing the data which has been gathered. It is important that this process should start soon after the data has been collected. Accordingly, in this study the analysis of the qualitative data started during the fieldwork process, when each interview tape was labelled by date and level or respondent, then entered on the computer to be used for the analysis. The data from the interviews was transcribed verbatim over a three-month period.

The confidentiality of the participants was ensured as the interviewer transcribed the interviews personally. The transcripts were then read multiple times to ensure that the researcher fully understood and was conversant with the content of the interviews. The transcripts were then critically examined using content analysis and by comparing and contrasting the information from the interviews. The data from all the districts were combined on the basis of the fact that there were no major differences between regions in respect of the data reported in the study. On the other hand, the national level interviews were treated individually.

The transcripts were again read repeatedly before, during and after coding to ensure the proper categorisation of the data. Initial categories were created based on the scope and sections in the interviews. However, these initial categories was then re-examined based on a better understanding of the data and re-categorised based on

emergent themes and sub-themes from the data and as guided by the theoretical foundations of the thesis. The redundant data from this process was carefully examined once more before being excluded from the study.

Figure 4.7 outlines the research phases – from the problem development to the finalisation of the thesis.
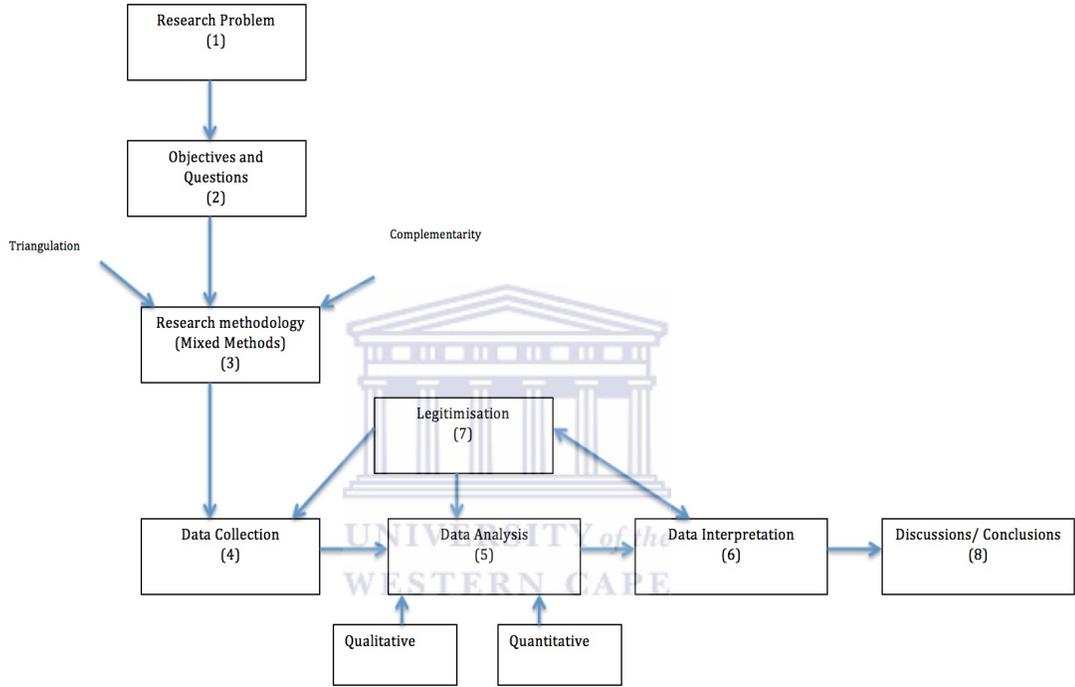
Figure 4.9: Phases of the research

4.7   Econometric Model

4.7.1   Standardisation Approach

The inequity within the decentralised health system in Ghana was empirically explored by estimating a standardised inequality index in order to decompose the inequity into intra and inter regional shares. There are various forms of inequalities the health system. Some of these inequalities are unavoidable and, thus, they do not constitute inequities. As defined in this study inequities reflect those inequalities that result from unequal economic and social conditions and which are both systemic and

avoidable. Thus, an accurate measure of healthcare inequities should account for the variations that are the result of avoidable demographic and pre-existing chronic health conditions. In order to do this, the index computed was standardised to eliminate the effects of unavoidable inequalities. O'Donnell and Wagstaff (2008) suggest that there are two approaches to standardisation, namely, the direct approach and the indirect approach.

The direct approach deals with grouped data by computing the need-standardised utilisation of medical care for each income or economic group. The value of the computed index depends on the number of groups (Wagstaff et al. 1999). Thus, the direct standardisation technique is suitable only when working with grouped data but may become a limitation as many studies analyse inequalities at the individual level. However, the indirect standardisation technique offers a solution to this problem. This approach may be applied to both grouped and ungrouped (individual level) data. The approach provides a value for each individual in the sample. This value is interpreted as the level of health care the person would have received if the person were treated in the same way as others with the same characteristics. Thus, this value reflects an individual's need for care. This study used the indirect standardisation technique as this technique relies on individual level ungrouped data.

Relying on data on maternal health variables means that there is gender uniformity and, thus, the need to standardise for the effect of gender does not arise. However, this study distinguishes between avoidable and unavoidable inequalities by standardising for the effect of both age and pre-existing medical conditions. The linear specification of the model is given below.

Let y_i be the health care outcome variable of interest. The standardised measure of health inequality, y_i^{IS} will be given by the difference between actual and expected health, and the overall sample mean.

$$y_i^{IS} = y_i - \hat{y}_i^x + \overline{y}$$

y_i^{IS} – standardised measure

y_i – actual value

$\hat{y}_i^{x}$ – expected value of health utilisation

$\overline{y}$ – mean value

4.7.2 Theil's Index

The Generalised Entropy (GE) indices provide a means of measuring redundancy in data, for example, inequality, lack of diversity, non-randomness, compressibility, or segregation (Novotný 2007; Conceicao & Ferreira 2000). For the measurement of inequality, the best known GE is the Theil T, also often referred to as the Theil's index. The Theil's index measures general disproportionality and was developed by the economist Henri Theil (Cowell 2006; Theil 1965; Theil 1971). The index may be used to sum the difference between the natural logarithm of shares of health and shares of population while the Theil's index is population weighted (Shorrocks 1980). The values of the GE measures vary between 0 and ∞, with zero representing an equal distribution and a higher value representing a higher level of inequality (McKay 2002).

The standard form for the Theil's T is written as follows;

$$T = \sum_{i=1}^{J} P_i R_i \ln R_i$$

P_i is the proportion of the population in group i

R_i is the ratio of the prevalence or rate of health in group i relative to the total rate,

4.7.3 Decomposition of the Theil's Index

The major advantage of the Theil's index is the ease with which the index may be decomposed. In the case of the additive index as shown above, the total value of the

Theil's index is derived from summing up its constituent parts (Novotný 2007; Shorrocks 1980; Shorrocks & Wan 2005; Shorrocks 1984; McKay 2002). Thus, for the purpose of the geographic decomposition the breakdown is as follows;

$T = T_a + T_b$ Where

T – Theil index

T_a – denotes intra group inequality

T_b – inter group inequality

4.7.4   Concentration Curves and Concentration Indices

Concentration curves may be used to plot the cumulative percentage of the health variable against the cumulative percentage of the population, ranked by living standards and beginning with the poorest and ending with the richest. The concentration curves plot shares of the health variable against quintiles of the living standards variable. Concentration curves may be used to examine a number of equity related issues in health, including inequality not just in health outcomes but also in any health sector variable of interest. In addition, concentration curves may be used to assess differences in health inequality across time and spatial dimensions (Kakwani et al. 1997; Wagstaff & Doorslaer 2000; O'Donnell & Wagstaff 2008; Pradhan et al. 2003) In addition, concentration curves help to determine the existence of socioeconomic inequality in health and whether such inequities vary over time and across space. The concentration curve is, however, limited as it does not provide a measure of the magnitude of inequality that may be conveniently compared across several time periods, countries, regions, or whatever may be chosen for comparison – for this purpose the concentration index may be applied.

Concentration indices (CI) are linked to concentration curves. Concentration indices (CI) enable the quantification of socioeconomic related inequalities in a health variable (Kakwani et al. 1997; Wagstaff et al. 1989). The index is measured as twice

the area between the concentration curve and the line of equality (the 45-degree line), taking the value of zero as denoting either perfect equity or the absence of inequities. The convention is that the index assumes a negative value when the curve lies above the line of equality (indicating a disproportionate concentration of the health variable among the poor) and a positive value when it lies below the line of equality. If the health variable is a "bad" such as ill health, a negative value of the concentration index would denote ill health as being higher among the poor as compared to the less poor.

4.7.5 Decomposition of the Concentration Index

Health inequalities may stem from inequalities in the underlying determinant of the variable of interest such as inequalities in the quality of the local health facilities, access to these local health facilities and opportunity costs. It is often important to know the relative contribution of each of these various inequalities. This study is interested in investigating the geographic differences in the inequalities in selected health variables. The study does this by applying a geographic decomposition of concentration curve (Wagstaff 2005) in order to explore health inequities in a decentralised system. This is useful because districts, which are decentralised jurisdictions, have geographic bounds. The purpose of the decomposition is to attribute shares of the value of the CI to within inter and intra locality inequality.

The geographic decomposition a concentration index is closely linked to the Gini inequality coefficient and is computed on the full sample. The total CI is a linear function and comprises between area inequalities (CI_A), within area inequalities (CI_B) and an error term specified as a ranking term R.

$$CI = CI_A + CI_B + R \text{ --------------(1)}$$

$$CI_B = \sum_{i=1}^{n} \alpha_i CI_i \text{ -------------------- (2)}$$

$$CI = CI_A + \sum_{i=1}^{n} \alpha_i CI_i + R \text{---------}(3)$$

$CI =$ Total value of CI

$CI_A =$ Inter area CI

$CI_B =$ Within area CI

$\alpha_i =$ Product of the ith area's population share and its share of the health variable.

$R =$ Residuals

Thus, with j number of areas, the specific form of equation three above is specified below.

$$CI = CI_A + \alpha_j CI_j + R \text{--------------}(4)$$

Table 4.8: Comparison of Theil's T and the concentration index

Index	Strengths	Weakness
Theil's T	Theoretically sound tool for analysing inequity and decomposition as a result of its additive nature Easy to interpret Completely decomposable without an error term Uses entire distribution Scale invariant	Much more complex measure than other statistical tools Not well known in the area of health inequality measurement as a result of its complex nature
Concentration	Has been extensively applied in the measurement of health inequalities Uses the entire distribution Offers flexibility in interpretation Takes into account changes in underlying socioeconomic variable Scale invariant	Application in binary variables is restricted Insensitive to changes in socioeconomic variable that do not affect the socioeconomic ranking Sensitive to the direction of the social gradient in health Decomposability is limited in it is not completely decomposable and leaves behind an error term Useable only with ordinal measures of social grouping

4.7.6 Principal Component Analysis

Principal component analysis (PCA) is a nonparametric statistical tool used to create an index. The index generated by PCA technique represents an unobservable variable[21] from an available set of observed variables (Shlens, 2009; Wall, 2006; Cahill and Sanchez, 2001; Ram, 1982). PCA technique works on the principal that

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[21] A variable that is not directly measured

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the unobserved variable is correlated with a set of directly measured variable by examining the correlations between these observed variables (Cahill and Sanchez, 2001).

The procedure allows information in many variables to be reduced by decomposing the variance in the data into factors or components. Each component is the sum of each of the observed variables multiplied by its weight, which is the proportion of the variance in the data accounted for by each of the observed variables. One of the components is usually chosen to be the index.

In this thesis PCA analysis is used in two ways. First due to the fact that the GDHS does not have measures of incomes and expenditure but has a wide array of assets variables, the PCA approach is used in deriving an asset index which served as one of the measures of socioeconomic status for the thesis. Correlations between observed variables in PCA were used to select the variables in constructing the health inequality index. This was achieved by running multiple PCAs from various combinations of variables available in the dataset.

4.8   Legitimation, Reliability and Validity

The level of rigour in the methods and techniques applied determines the utility of a research study. Without rigour, research is essentially a worthless endeavour and, thus, considerable attention is focused on the reliability and validity of all research methods (Morse et al 2002). This study addresses these issues in a number of ways, and the use of secondary quantitative data, the GDHS, means that data has been checked at the highest level for inconsistencies, thus regression techniques suitability and rigour will be tested using specific tests for the regression approaches used. The study also used triangulation techniques to ensure the adequacy and accuracy of all the data gathered and the approaches used.

Qualitative analysis techniques have developed significantly since the assertion of their lack of reliability and validity in the 1980s (Morse et al. 2002). A number of

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writers Guba & Lincoln (2001) have suggested terminologies and approaches for ensuring the reliability and validity of qualitative analysis, thus resulting in a wide array of approaches in discerning rigour in qualitative techniques. This, in turn, culminated in the need for standardisation (Morse et al. 2002). In qualitative research verification refers to the mechanisms used during the process of the research to incrementally contribute to ensuring reliability and validity and, thus, the rigour of a study. These mechanisms are woven into every step of the inquiry in order to construct a solid product (Kvale 1989; Creswell 2012) by identifying and correcting errors before such errors are built into the developing model and before they subvert the analysis.

Thus, verification encompasses ensuring that reliability and validity are relevant in the process of theory development and thinking theoretically, methodological coherence, sampling sufficiency, as well as developing a dynamic relationship between sampling, data collection and analysis.

Ultimately the study outlined and reflected on the limitations of findings and interpretations at all stages of the research process and how these were addressed. Overall legitimation is achieved by ensuring consistency between methods and questions throughout the study.

4.9   Ethical Issues

Ethical decisions are required throughout a research project and pertain to all aspects of a study. The making of ethical decisions almost always involves facing a series of dilemmas. There is rarely one straightforward answer, and it is essential that decisions are made on the basis of reflection on balancing certain basic ethical principles rather than ad hoc reactions to emerging situations (Miller et al. 2012). Ethical issues remind researchers of the formalities that must be adhered to before, during and after undertaking research but also of the responsibilities of researchers to

the interviewees. This study aimed to ensure maximum social benefits and minimise social harm to all, ensuring no local or international laws were infringed upon in the process of conducting the study (Diener & Crandall 1978; Miller et al. 2012; Benatar & Singer 2000).

The researcher sought the permission of all relevant bodies in Ghana and received ethical clearance for the research instruments from the ethics committee of the institution under whose auspices the study was being conducted. The researcher also sought the consent of all the interviewees, giving each person the opportunity to withdraw from the interview. The research adhered strictly to the following principles, namely, confidentiality of information, anonymity of all participants, informed consent and providing feedback to the participants and the research community as a whole. In addition, all the participants were protected from undue intrusion, distress, indignity, physical discomfort, personal embarrassment and/or psychological or other harm. The study verified and corroborated the data to ensure factual accuracy and avoid falsification, fabrication, suppression or misinterpretation of the data. In writing up the research findings, the researcher ensured the use of unbiased language in all the chapters. Finally, all the data emanating from the study, including interviews, transcripts of interviews, documents and files have been organised and stored for future reference.

4.10   Chapter Summary

The chapter discusses the processes of the research study. Accordingly, the chapter described the research design used in the thesis – the mixed methods design. The chapter also provided a sound justification for the application of the mixed methods approach, arguing that the nature of the research questions and the need for both triangulation and complementarity justified the adoption of a concurrent mixed methods design for the purposes of the study.

The explanation of the study design was followed by a discussion of the method used to conducting the research study. This included a discussion of the motives and reasons underlying the sample methods which had been identified and applied. The chapter also outlined the various data sources that were used to realise the objectives of the study. It was noted that the study had adopted a purposive sampling technique and that it had relied on data from three major sources, namely, secondary data from the household survey, primary data from the interviews and archival data from records and national reports.

The chapter then provided a summary breakdown of the research questions; specifying the types of data which had been gathered to address each question and the analytical approach that had been used to answer each question. This was followed by a diagrammatic representation of the research stages.

The econometric model/techniques used for the data analysis were specified. This included a discussion on the concentration index and Theil's indices which were used to analyse inequities in maternal health utilisation variables. This was followed by an explanation of decomposition techniques which were used to compute within region and between region shares for these indices. The chapter concluded with a discussion of the presentation of the techniques which were to ensure the reliability and validity of the study and adherence to a strict research ethical code.

Chapter 5

The District Assembly and Health System Nexus in Ghana

5.1   Introduction

This chapter presents an overview of both Ghana's current decentralisation program and of Ghana's health system and the decentralisation of the health system. In reviewing Ghana's decentralisation program the chapter examines the legal institutional, fiscal and administrative framework governing the decentralisation reforms. In addition, the chapter also examines the evolution of the process of decentralisation since its inception in 1993 to the current period (2013), outlining the revisions in the programme which had sought to improve it.

The chapter also discusses Ghana's health sector, outlining its structure and exploring transformations in the sector. The second section of the chapter presents an analysis of the interviews which were conducted with the aim of obtaining a comprehensive understanding of the status of the health sector decentralisation by examining the motives behind and the nature of health sector decentralisation in Ghana.

The chapter concludes by critically examining the nexus between the health sector and the political decentralised structure of the district assemblies, describing the current situation and also outlining crucial elements in the process of their working together. This addressed the research question on the status of decentralisation both in Ghana and in the health sector. The chapter also provided additional country specific data on the motives for decentralisation, thus providing a deeper understanding of the decentralisation of Ghana's health sector.

5.2   Political Overview and Implications for Decentralisation

The decentralisation process in Ghana is a product of the political and economic conditions in the country, both current and historical. Local government was first introduced to the Gold Coast by the colonial government. In a system that was known as indirect rule the British colonisers handpicked traditional leaders who were then used as local administrators (Inanga & Osei-Wusu 2004).   The local government system was structured on Ghana's traditional pattern of government. This system was formalised with the introduction of the Municipal Ordinance of 1859 and which created municipalities in the coastal towns of the Gold Coast (Crawford 2004; Dick-Sagoe 2012; Ahwoi 2010).

The political history of Ghana may perhaps be described as more chequered than the economic history, dominated as it is by coups d'états. However, it must be noted that the area that is currently known as Ghana has only existed for 100 years(Daaku 1970; Crawford n.d.). This region includes the former British colony of the Gold Coast and German Togoland. Ghana's history may be traced back to the 13th century to a region which was dominated by the states of the Ashanti, Denkyira and Fante empires and the northern states of the Dagombas and Gonjas. There is, however, little documented about this period (Crawford n.d.; Daaku 1970).

The first Europeans, the Portuguese, arrived on the shores of the Gold Coast in 1471. Between 1471 and 1874, when the area became a British crown colony, the Danish, Dutch, Swiss and English all landed on the Gold Coast, mainly to trade (Cruickshank 1966; Rodney 1969; YeboaDaaku 1970). Prior to the formalisation of colonial rule the British controlled the region through negotiated treaties with coastal chiefs, with the region being overseen by governors. The first such governor was Commander H. Worsley Hill who was appointed in 1843 (Crook 1986) . The governors ruled through a legislative council comprising a few British colonial officials and chiefs of the colony. Under the highly centralised colonial administration the governor worked under the supervision of a British minister, the Secretary of State for Colonies.

The colony included three distinct territories which had become a single political unit, namely the coastal protectorates, Ashanti protectorate and the northern territories, and were ruled by proclamation until 1946. The British had instituted a system of indirect rule, ruling the citizens of the colony through the traditional rulers. The British described this system as both cost effective and practical as it not only reduced the number of British officials required in the colony but also minimised any opposition to British rule on the part of the local people. This continued until 1946 when the new Gold Coast constitution was enacted.

The new constitution was born out of the general discontentment which was triggered by the post Second World War economic hardships. The Gold Coast colony had helped Great Britain but the post-war economic hardships badly affected the general population, including the war veterans. This fuelled discontent among a growing core of Gold Coast elites. The elites were of the opinion that the chiefs, in return for British support, had allowed the provincial councils to fall completely under control of the central government which was mainly British and the elites started to demand more adequate representation. The constitution then made provision for this by increasing the African representation on the Legislative Council which was composed of six ex-officio members, six nominated members, 18 elected members and, for the first time, a representative from Asanti Kingdom. The presence of the elected members in the majority on the legislative council initiated the process towards full self-government.

In 1947, a group of educated Africans founded the first post World War Two nationalist political movement in the Gold Coast – the United Gold Coast Convention (UGCC). The aim of the UGCC was to achieve "self government within the shortest possible time" (Austin 1970)while a more immediate aim was to replace the chiefs on the Legislative Council with educated individuals (McLaughlin & Owusu-Ansah 1995). The UGCC did not seek drastic and immediate change but preferred a gradual approach in terms of which the British leaders would eventually be replaced by the elites. However, this changed when the UGCC invited Nkrumah,

who had been active in the West African Student Union and in pan-African politics while studying in the United States, to become the general secretary of the UGCC (McLaughlin & Owusu-Ansah 1995; Crook 1986).

Nkrumah's time with the UGCC was stormy and included arrest and detention with other leaders of the UGCC for political activism. Nkrumah then broke away from the UGCC with his "veranda boys", a group of radical young nationalists who identified themselves with the ordinary working people, to form the Convention People's Party, in June 1949 which demanded "Self Government Now" (McLaughlin & Owusu-Ansah 1995; Austin 1970). The new constitution of 1951 – a response to the disturbances in the colony – made provision for an Executive Council which was made up of large majority of African ministers, half of whom were elected and the other half from the traditional councils. Nkrumah and his CPP appealed to the majority of the politicised population and his arrest for sedition as a result of initiating a campaign of wide spread strikes and nonviolent resistance which turned violent, confirmed him as the people's choice. Nkrumah went on to win his legislative seat from prison in an election in which the CPP won 71 of the available 104 seats. He was released from prison and offered the opportunity to form a government, taking on the role of the Leader of Government Business – a position similar to that of a Prime Minister by then governor Charles Arden-Clarke.

Backed by popular support and under the leadership of Nkrumah and the CPP, the government of the Gold Coast was transformed into a full parliamentary system, despite opposition from the more traditional elements, especially within the Ashanti and Northern Territories. Nkrumah assumed the position of prime minister after the 1954 elections in which the people elected all the members of the legislative council directly. The CPP won a further election in 1956 and passed a unanimous motion authorising the government to request independence within the British Commonwealth. The British government accepted the results of the vote and the Gold Coast was confirmed as a commonwealth On 7 March 1957 the country was renamed Ghana with Nkrumah as Prime Minister and Queen Elizabeth II as

monarch. The country became a full republic after a national referendum in 1960. A summary of Ghana's political regimes since independence is presented in Table 5.1.

Table 5.1: Post-independence political regimes in Ghana[22]

Political Party	Leader	Dates	Type
Convention People's Party (CPP)	Nkrumah	1957–1966	Civilian
National Liberation Council Regime (NLC)	Ankrah	1966–1969	Military Regime
Progress Party Administration	Busia	1969–1972	Civilian
National Redemption Council (NRC)	Acheampong	1972–1975	Military Regime
Supreme Military Council (SMC)	Acheampong Akuffo	1975–1978 1978–1979	Military Regime
Armed Forces Revolutionary Council (AFRC)	Rawlings	June–September 1979	Military Regime
Peoples' National Party Regime (PNP)	Limann	1979–1981	Civilian
Provisional National Defence Council (PNDC)	Rawlings	1982–1992	Military Regime
National Democratic Congress (NDC)	Rawlings	1993–2000	Civilian
New Patriotic Party (NPP)	Kufuor	2001–2008	Civilian
National Democratic Congress (NDC)	Atta-Mills Mahama	2009–July 2012 July 2012–present	Civilian

The country experienced its first military overthrow of the government in 1966 when the government of the Convention People's Party (CPP), led by Ghana's first president, Dr Kwame Nkrumah, was overthrown (Nkrumah 1968). Three years after the overthrow, the military takeover regime led by Col. Ankrah handed over the reins of power to the democratically elected civilian prime minister in the person of Dr. Busia and his Progress Party. However, barely three years later there was another

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[22] Source: adapted from http://www.ghana.gov.gh/index.php/about-ghana/ghana-at-a-glance/447-ghana-revolution-and-political-history

military coup which saw the overthrow of the civilian government with the country reverting to military control in January 1972 (Decalo 1973; Feit 1968). This ushered in a period that may be described as the darkest days in Ghana's political history as successive military regimes were replaced by other military regimes before Lt. Rawlings took power in 1981 and banned all political parties. It must be noted that this was the second coup led by Lt. Rawlings (Decalo 1973; Owusu 1989). Lt. Rawlings stayed in power as a military leader for 19 years and initiated and approved the new fourth republican constitution which restored multiparty politics in 1992.

Currently, Ghana is viewed as a stable, young democracy with over 20 years of democratically elected presidents, spanning 6 multiparty elections, two changes of power from the incumbent government to an opposition party and five different presidents (Aryeetey & Kanbur 2005). The current democracy was tested in July 2012 when the then president, Prof. Atta-Mills, died in office and was constitutionally succeeded by his vice president, John Mahama. Mahama went on to win the December 2012 presidential election, making this the first time that power had changed hand from one president of an incumbent party to another. This was not, however, without controversy as the opposition party challenged the results of the elections in the Supreme Court but lost the case in a ruling delivered in August 2013 – eight months after the victorious president had been inaugurated in office.

5.2.1 Overview of Decentralisation in Ghana

In the early post independence period the government of Nkrumah promulgated the Local Government Act of 1961 (ACT 54), which instituted local authorities as the agencies of the central government in their respective jurisdictions. However, the presence of the executive ministerial layer of government undermined the local authorities, rendering them ineffective. Decision-making at the local level, which had to be routed through the ministerial level, was an extremely lengthy process and has been described by certain writers (Nkrumah 2000; Crawford 2004) as a weakening of the local government system. Other attempts at decentralisation

included a deconcentration by the military regime of Col. Acheampong in 1974. This was described as a means of strengthening central government control at the local level rather than ceding power and decision making to lower levels (Nkrumah 2000; Ahwoi 2010).

The current form of decentralisation has been described as an outcome of the populist policies of the PNDC government and a requirement for development assistance under the SAP/ERP, which happened in the country in the early 1980s. These were further motivated by a demand for infrastructure and services at the local levels. The IMF led SAP/ERP focused primarily on reducing the size of the state through economic liberalisation, deregulation and an embracing of the private sector (Dick-Sagoe 2012; Amanor & Annan 1999). In its second phase the SAP/ERP focused on institutional reforms and the promotion of democracy at the local levels through the strengthening of linkages between the state and civil society. Decentralisation inevitably became a channel through which effective linkages between civil society and the state could be used to promote an improved and more responsive government (Mohan 1996; Amanor & Annan 1999).

According to Ayee (1994, pp.200–202), decentralisation was also an attempt by the military government to increase its legitimacy and simultaneously to rid itself of political problems. The decentralisation process in 1992 included a combination of political, administrative and economic decentralisation. The local government system which was developed Consists of a Regional Co-ordinating Council, a four-tier Metropolitan and a three-tier Municipal/District Assemblies Structure. A Metropolitan/Municipal/District Assembly (MMDA) is responsible for the overall development of the district(Crook 1994; Akramov & Asante 2008; Goel 2010; Hoffman & Metzroth 2010).

5.2.1 Legal and Administrative Framework

The legal framework governing the current decentralised system in Ghana is the 1993 Local Government Act (Act 462). This Act covers the establishment and

functions of the local government system, its administration and other activities, planning, by-laws and financing (Government of Ghana 1993). The Act mandates that executive instruments establish decentralised units with recommendations from the National Electoral Commission. In addition, the Act limits the size of districts by population[23], requiring geographic contiguity. The Act also mandates that districts should be economically viable units in that they should be able to generate resources internally to provide for the basic infrastructural and developmental needs of their inhabitants.

The District Assemblies include the following functionaries; the District Chief Executive (DCE), an elected representative from each electoral area, the member/s of parliament from the electoral constituencies within the geographic bounds of the district and additional appointees by the president in consultation with traditional authorities and local interest groups and not exceeding 30% of the total membership of the District Assembly. Elections to the District Assembly (DA) must be conducted on a four year cycle at least six calendar months before a general election and any resident of the district who is a registered voter and in good standing may be a member of the District Assembly.

The District Assemblies have legislative and executive functions and formulate and implement a medium term plan (usually five years) and budget, both subject to the approval of the central government. The DAs are assigned the overall responsibility of coordinating, integrating and harmonising the activities of all the development agencies in the district, including the central government ministries, departments and agencies and non-government organisations. The grassroots level of the district assembly structure is composed of two-tier sub district structures, namely; zonal and town/area councils and unit committees (UC). These bodies carry out the duties delegated to them by the District Assemblies but without budgets of their own. The UCs are responsible for settlements comprising approximately 500 to 1000 people in

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[23]The Assemblies are either metropolitan (population over 250,000), municipal (population over 95,000 and less than 250,000) or District (population 75,000 and less than 95,000) (CLGF).

the rural areas and approximately 1500 in the urban areas and act as a link between the remotest rural locations at the grassroots to the district levels (Crawford 2005).

5.2.2   Ghana's Institutional Context

Ghana currently has four layers of government below the national level, increasing to five in the metropolitan areas which have an additional intermediate level – the sub metropolitan council. The first level of Ghana's local government comprises the 10 Regional Coordinating Councils. These councils are appointed by the president and consist of the regional minister as chairman, a deputy/deputies, two traditional leaders (chiefs) the district chief executives or mayors in metropolitan areas and presiding members (Chairman) of the District Assemblies (Crawford 2005).
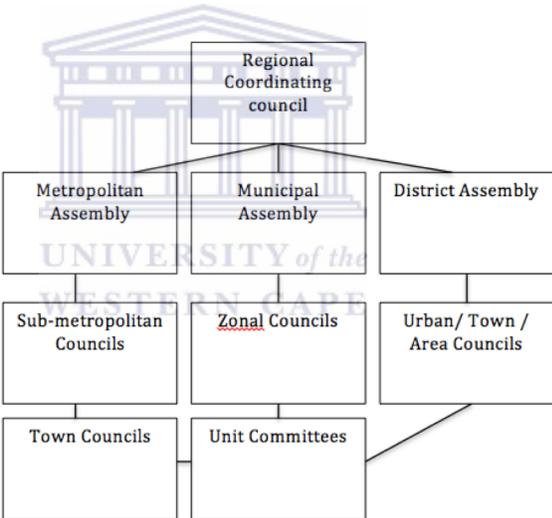
Source: Adapted from Goel, 2010

Figure 5.1: Structure of local government system in Ghana[24]

The second layer below the regional level consists of metropolitan (population over 250,000), municipal (population between 95,000 and 250,000) and district

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[24] Source: Adapted from (Goel 2010, p.2)

(population less than 95,000 and not smaller than 75,000) assemblies. These assemblies are assigned the overall responsibility of coordinating, integrating and harmonising the activities of all the development agencies in the assemblies, inclusive of central government ministries, departments and agencies and non-government organisations. The assigned legislative and executive functions of assemblies mandate them to formulate and implement a medium term plan and budgets, both subject to approval by the central government.

At the lower levels are the two-tier sub district structures namely; zonal and town/area councils and unit committees (UC) which carry out the duties delegated to them by the assemblies but without budgets of their own. The UCs cover settlements of approximately 500-1000 people in the rural areas and approximately 1500 in the urban areas and act as a link between the remotest rural locations at the grassroots to the district levels (Crawford 2005). The UCs are partially elected bodies consisting of ten elected members and five government appointees again selected by the DCE. In essence the UCs constitute the mechanism for representation, participation and accountability from the lowest levels (Crawford 2005).

Local governments are mandated to be non-partisan and they conduct elections for 70% of the assembly members. In an inclusive process the president, in consultation with local interest groups, nominates the remaining 30%, subject to approval by the assemblies (Goel 2010). Local government elections are organised by the electoral commission and financed by the central government.

In a move clearly designed to distinguish the Civil Service made up of the personnel of the central planning agencies and the local government services, (designated to represent the personnel rendering services at the level of decentralised institutions), Act 656 of 2003 established the Local Government Service (LGS). In addition the cabinet endorsed a National Decentralisation Action Plan (NDAP) in February 2004. The NDAP initiated the transition process towards the development of a comprehensive, well-sequenced and costed approach to decentralisation. The NDAP

is primarily an operational plan that seeks to promote work on the harmonisation of development funding and capacity building (Hoffman & Metzroth 2010; Ministry of Local Governmnet and Rural Development 2003). It also includes a specific new policy direction.

5.2.3   Fiscal Decentralisation

In terms of the legislature which made provision for their establishment District Assemblies are required to be economically viable and to generate revenue locally for developmental purposes within the districts. In addition, as developmental agencies at the local level, these assemblies are supposed to possess adequate financing to meet the developmental needs of the local population. Accordingly, districts, at the point of decentralisation, were provided with three major sources of revenue, namely, internally generated revenues (IGRs), the District Assemblies Common Fund (DACF) and other transfer funds from the central government such as; ceded revenues and recurrent expenditure transfers. Inanga and Osei-Wusu, (2004) argue that this situation may have led to the over-reliance of local governments on central government transfers. Other sources of funds for districts include direct donor funds. However, these funds are made available to some districts but not all. In many instances the DACF has been replaced by the District Development Fund (DDF) as a result of disbursement delays. The DDF was established to provide additional funding for the districts to enable them to meet local developmntal needs and to minimise the financing gap at the district level.

a. Internally Generated Revenues (IGRs)

Internally generated revenues include all locally generated revenues available to the districts. As a result of the fact that the IGRs are the only funding source under the full control of the districts they have the potential to be the most reliable sources of

district funding to the district assemblies. An official at the Ministry of Finance explained;

> *We have been encouraging them to develop their IGF sources because that it is for you. A donor can refuse to give you, you cannot take them anywhere, there is nothing you can do but, if by by-law, you are supposed to pay basic rates or property rates and you refuse to pay you can be arrested and, if central government is also having challenges with the fund flow, you still have to wait but the IGF, you are sitting with it, so you need to develop it and collect it.*[25]

> *National Officer 01*

The districts are also mandated to generate local revenues from both taxes (incomes of the self employed, businesses and property) and non-taxes (user fees, licences, royalty payments and permits) based on guidelines issued by the local government ministry. These funds are categorised as internally generated revenues (IGRs). The process of collecting IGRs involves area councils which, as stipulated in the Area Councils Act, collect revenues on behalf of the DAs. The councils are entitled to retain 50% of all the revenue collected for local development activities within the districts.

However, the IGR component of the District Assemblies' revenues tend to exhibit wide disparities with some districts being barely able to generate any revenue at all and, therefore, being almost solely dependent on transfers from the central government to meet their obligations to their citizenry. According to Akramov and Asante (2008), while certain well-endowed assemblies are able to cover up to 70% of their total expenditures from their IGRs, the more deprived assemblies may manage a meagre 5% of their total public expenditures and, thus, rely heavily on transfers.

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[25]Author's fieldwork, 2012

The data from the DACF report (Table 5.2) reveals that, while the revenue generations of some districts were extremely low, the revenue generations of others were significantly high – for 2010 the minimum revenue generated was USD 5807.53 while the maximum was USD 6082474.227. In addition, a further examination of the per capita revenues from the districts reveals a minimum of close to zero (USD 0.005) for 2010 and a maximum of USD 14.00. The mean of USD 1.624 and the median of USD 1.2547 for the per capita revenue prove that the majority of districts do not perform that well as regards revenue generation and that revenues for both 2010 and 2011 were positively skewed. The large standard deviations in the data reflect significant variations between districts.

Table 5.2: Distribution of district revenues in USD[26]

Year	2010				2011			
Revenue	Mean	Median	Min	Max	Mean	Median	Min	Max
Total	239537.784	100379.897	5807.531	6082474.227	365175.361	118754.330	14627.820	15876288.660
Per capita	1.624	1.2457	0.005	14.000	2.297	1.316	0.003	110.832

Source: Author's own computation based on District Assemblies Common Fund (2013)

The reasons provided by some of the districts and officers interviewed for their inability to generate substantial IGRs ranged from capacity issues to district size and location. Some of the assemblies have also raised issues in respect of the classes of taxes and fees available to them as these are generally taxes from informal sector activities such as user fees, licences, royalty payments and permits. Thus, those

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[26] Based on exchange rate for April 2013 when data was published of 1.94 Ghana Cedis to the USD (http://www.bog.gov.gh/index.php?option=com_wrapper&view=wrapper&Itemid=298). Did not use purchasing power parity conversion because the study did not conduct any international or cross country comparisons.

districts that do not, for example, receive royalties and award permits are significantly disadvantaged.

b. The District Assemblies Common Fund (DACF)

Article 252(2) of the Ghanaian constitution established the District Assemblies Common Fund **(**DACF) in 1993. The actual levels of the fund are set annually by Parliament with the allocations "not less than 5% of the total revenues of Ghana"(Government of Ghana 1993, pp.v–3484). The DACF is an intergovernmental transfer fund which is shared among the DAs and based on a revenue sharing formula approved by Parliament. The sections of the district budget that may be financed using common fund resources are determined jointly by the Ministers of both the Ministry of Finance and Economic Planning and the Ministry of Local Government, Rural Development and the Environment, in consultation with the DACF Administrator. Although the fund was established to complement local revenues only many districts have come to rely on the DACF as their primary source of funding. In 2004, transfers from the central government accounted for more than 80% of the total local revenues (Akramov & Asante 2008).

The formula for the allocation is based on a basic-needs-based approach to development and takes into account health service, educational services, water coverage and tarred road coverage. The formula further includes indicators for responsiveness which capture the efforts made by assemblies to generate their own revenues while a service pressure indicator takes into account the district size and the rural/urban nature of the districts. In short, the formula includes the following indicators; need factor, responsive factor, equalisation factor and service pressure factor[27].

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[27] The DACF formula is flexible and has changed almost annually since its inception in 1994. As a need based formula the formula comprises the following elements; "NEED", "RESPONSIVENESS" and "SERVICE PRESSURE". Each category comprises a number of sub indicators, which are transformed using various functions. A district's share of the fund is calculated as a weighted linear combination of the transformations, increasing in some indicators and decreasing in others. Every year three scenarios are presented to parliament for the allocation of which is recommended and often approved.
EQUALITY indicator is a simple division of a portion (50% in 2013 calculations) of the fund by the number of districts.

To date the DACF has been used for a number of socio-economic activities. The largest component of DACF spending is the administrative cost which includes capacity building, rural housing, security, accommodation, logistical support and project management. The DACF is clearly the funding source on which the assemblies place the most reliance as it continues to constitute the largest component of the revenues of many assemblies.

However, the fund faces a number of challenges which do not augur well for the developmental purposes it is required to serve with assemblies pointing to delays and a lack of reliability in fund disbursement as the major challenges

> *To us the Common Fund is virtually losing its purpose because the DACF is not regular.*

> *District Assembly Officer 02*

These were the comments of a District Officer who was interviewed. Another major issue in respect of the DACF is what the districts term interference from the central government in the use of DACF. This refers to several expenditures being undertaken from the central government and deducted even before these funds reached the districts. A district assembly officer who was interviewed explained the situation as follows;

> *We have a lot of interference from the central government where there are always deductions, the central government does a lot of things for the district assemblies and deducts from the allocations before it comes. When this happens you realise that, when you have some allocation of about 2 million Ghana Cedis and you have planned here and budgeted for some activities to be done and maybe it is coming and some resources are deducted from the*

RESPONSIVENESS indictor looks at at district's improvement in revenue generation and collection and is computed as a percentage increase in the revenue generation over previous years.
SERVICE PRESSURE compensates primarily urban assemblies for the over utilisation of services by travellers/visitors (for commercial activities)
NEED factor measures a district's lack of services relative to other districts in the country and includes indicators such as the number for health facilities, education services, tarred roads coverage and water coverage.

common fund, certainly what will be coming will affect your implementation.[28]

District Assembly Officer 04

For the districts the situation referred to above has impacted significantly on their ability to plan regarding the DACF allocations. The assemblies also complain about the lack of reliability of the funds disbursement. The DACF allocations, which are based on the tax revenues generated, are, by unwritten agreement between the assemblies and government released a quarter in arrears. However, the arrears in many instances have gone beyond a quarter and this, in turn, creates challenges, especially for those assemblies that do not have alternate sources of funding nor the ability to generate substantial IGRs.

It is not regular too so it does not make the development plans and budgets of the assemblies realistic because you are planning for this year, you would not believe that, as we sit now, we are in almost the 3rd quarter of the year and not even the first quarter has been released yet or disbursed. It means all the activities you planned for this year will be rolled over to next year and then the next year plan is also on hold. Certainly it has a bearing on the development process of the district and between the districts.[29]

District Assembly Officer 04

After several calls to increase the allocation to DACF in 2007 the fund minimum was raised in practice to 7.5%, although the minimum established by law remains at 5% of the total government revenues.   The increased fund minimum was implemented the start of the 2008 fiscal year. Owusu (2005) argues that increased transfers to districts will result in the economic growth of the districts. Currently the

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[28]Author's fieldwork, 2012

[29]Author's fieldwork, 2012

common fund administrators transfer an estimated 7% of revenues annually to the districts (Government of Ghana 2013).

c. District Development Facility (DDF)

The Districts Development Facility (DDF) was established in 2006 as a means to provide additional developmental funds to the assemblies. The DDF is a performance based funding mechanism which is available to the districts as an additional funding source for meeting local developmental needs. Districts are evaluated in terms of key criteria.[30] The results of the evaluation are published in local newspapers to ascertain whether the districts qualify for the district development fund in the following fiscal year. The fund is a partner fund of the Government of Ghana and donors and aims both to minimise the "projectising" of donor support to districts and to ensure that funds are available for each district to use on its own priority sectors and programmes of choice. Currently, together with the Government of Ghana, four active donors[31] contribute funds to the DDF. The fund aims to increase this number on the basis of a track record of accountability and developmental outcomes.

The focus of the fund is to meet local development needs and, thus, the local government is not allowed to use the funds for recurrent expenditures and the purchase of office equipment and vehicles. However, it is the view of the DACF administrator that the restrictions on the use the DDF and other donor funding mechanisms place undue pressure on the Common Fund and also result in the abuse of the Common Fund.

> *The effect of those restrictions is that they fall on the Common Fund to do those things they cannot use the DDF for. Let me give you a classic example – you say you cannot use the DDF to travel and you cannot use the DDF for*

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[30] Functional and Organisation Assessment Tool (FOAT) which assesses compliance with existing, rules, regulations and policies.
[31] Agence Francaise de Development, Canadian International Development Agency, Danish International Development Agency and KFW Development Bank

accommodation and you go to the districts and invite the assemblies for a meeting in the regional capital. Who should fund that? They use the Common Fund.

National Officer 09

The fund includes a capacity building element which is available to all local governments which who do not necessarily meet the performance criteria. This, in turn, ensures that those District Assemblies that are not able to meet the qualifying criteria as a result of capacity issues are not left out and may, possibly, with the help of the capacity development grant, be able to meet the criteria at a later date. The fund is also allocated on the basis of a formula which takes into account the following factors; land size, population and poverty level.

5.3 Amendments to Decentralisation in Ghana

In an effort to improve the decentralisation process the decentralisation policy has undergone a number of significant reviews and amendments. These include; the creation of the local government service, increasing the number of district assemblies, creation of a members of parliament fund, raising the level of the DACF and the creation of additional funding for development at the district level.

Ghana's decentralized system of government was designed to transfer political administrative and financial authority to devolved district assemblies. This is clearly provided for by the 1992 constitution of Ghana. However within a decade of adoption and practice of decentralization under the 1992 constitution (1993-2003) it had become evident that the intended purposes had only been partially achieved. Article 14 section 5 (d) of the constitution required the state to "make democracy a reality by decentralizing the administrative and financial machinery of the government to the regions and districts and by affording all possible opportunities to

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the people to participate in decision making at every level in national life and in government.

Chapter 20 of the 1992 constitution has listed the essential prescriptions for achieving this objective:

a. Transfer of function and powers, responsibilities and resources from the central government to local government.

b. Measures to build the capacity of local authorities to plan, initiate, coordinate, manage and execute policies.

c. Establish a sound financial base with adequate and reliable sources of revenue.

d. Vest control of persons in the service of local government in local authorities.

e. Create opportunities for people to participate effectively in governance to ensure the accountability of local authorities.

To achieve these parliament enacted the necessary legislation to empower local authorities but the allocation of human and other resources to facilitate the performance of the functions was not achieved. There were serious complains about the lack of accountability on the part of local political authorities, in particular the Chief Executive who is the political head. Some service and financial management laws which were passed tended to undercut the devolution of power to the assemblies. In addition the role of the region in the decentralization scheme was unclear and administration at that level inadequately financed. In order to rectify these inherent weaknesses a National Decentralization Action Plan (NDAP 2004) was adopted and implemented (Republic of Ghana. 2004).

Cabinet endorsed a National Decentralisation Action Plan (NDAP) (February 2004). The NDAP has initiated a transition process towards the development of a comprehensive, well-sequenced and "costed" approach to decentralisation. The NDAP is foremost an operational plan that seek to progress practical work on harmonisation of development funding and capacity building (GoG and DPs, 2007).

Among the key achievements of NDAP 2004 were the adoption of the functional organizational assessment tool (FOAT), the legislation to establish the local government service and a plan to decouple local government from the central government civil service (Republic of Ghana. 2010). The achievements of NDAP 2004 led to the adoption of NDAP 2010 and now the formulation of the National Decentralization Action Plan on a four-year basis has become official policy and standard practice in order to ensure consistent implementation and improvement of Ghana's decentralization programme on a sustained basis (Republic of Ghana. 2010).

The current decentralisation process was initiated in 1988 with the creation of 85 district assemblies in the 10 existing administrative regions in the country under the Local Government Law of 1988 (Law 207). By the time the current legal and organisational framework of the decentralisation program had been created in 1993 in terms of the 1993 Local Government Act (Act 462), the number of district assemblies had increased to 110. Currently there are 216 districts in the 10 regions of the country. There are several factors which account for the increasing number of districts with the most important being the large size of certain districts and population growth.

In 1997 a call from sitting Members of Parliament (MPs) and a brewing conflict between the District Chief Executive (DCEs) and MPs over which of the two parties was responsible for the developmental needs of the local people resulted in the creation of a members of Parliament common Fund. The conflict was a result constituency members demanding that MPs meet the developmental needs of the constituencies. Though the MPs were not being allocated any funding for local development. This, in turn, resulted in MPs being allotted 4% of the DACF for developmental projects in the districts (MPs' Common Fund).

The MPs' Common Fund was used primarily by the MPs to provide social services at the local level. The funds were used mainly in the education, health and sanitation sectors with several MPs establishing scholarship programmes for members of the local communities. However, the MPs Common Fund was done away with in terms of the most recent amendment to the decentralisation policy (2010 policy review). A Members of Parliament Development Fund to be accessed directly by the Members of Parliament and that would not come from the district level resources was established in place of the MPs' Common Fund.

Since its inception in 1993 the DACF, had been funded at the rate of 5% of the national tax revenue. This was, however, seen by the Assemblies as grossly inadequate and it was argued that, if districts were to be able to perform their function as agents of development in the locality, more funds needed to be made available from the central government. This culminated in an increase in the DACF allocations in 2008 to 7.5% of the total national revenues (Appiah-Agyekum 2013; Akramov & Asante 2008). The District Development Facility (DDF) was also initiated in 2009 with the aim of modernising and improving the funding to sub-national government. This fund ensures increased finance to local government and has had the direct outcome of strengthening the decentralisation process.

5.4   Ghana Health Sector

5.4.1   An Overview

The two main institutional players in Ghana's public health system are the Ministry of Health (MOH) and the Ghana Health Service (GHS). The Ministry of Health is primarily responsible for the policy planning processes and information management, specifically in the areas of health financing, human resources and development of health infrastructure and equipment. The Ministry is also responsible for overseeing both public and private health facilities. Prior to the health sector reforms of 1996, the Ministry was also solely responsible for the implementation of activities and budget within the health sector.
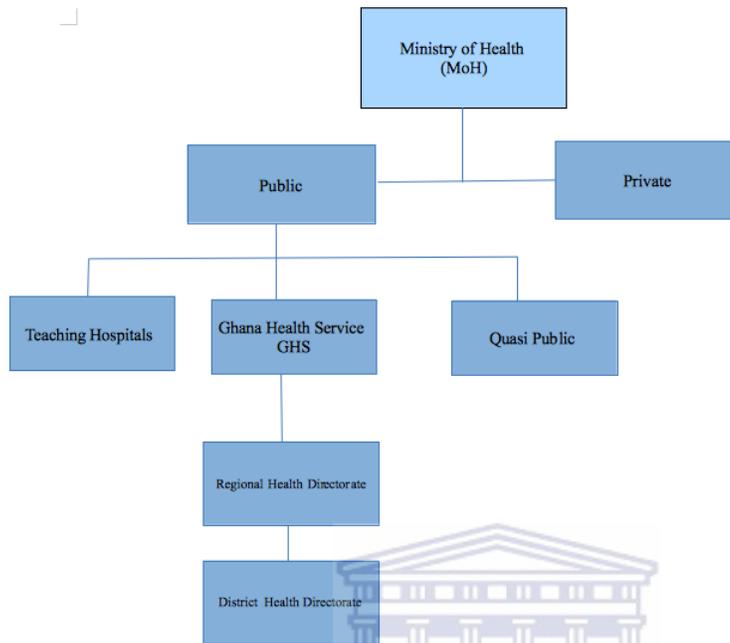
Figure 5.2: Ghana health sector structure[32]

The 1996 health sector reforms (Act 325) resulted in the current structure of the Ghana Health system and the establishment of the Ghana Health Service as an autonomous public agency responsible for implementing national policies in the area of health. These reforms took place under the auspices of the Ministry of Health through the medium of the Council of the GHS. The GHS is organisationally deconcentrated at three levels, namely, national, regional and district levels. Each level is headed by a health director who is responsible for making decisions – , see structure presented in Figure 5.2 above. Below this level are the sub-district levels.

The Regional Health Administration or Directorate (RHA) is responsible for providing supervision and management support to the districts and sub-districts within each region. On the other hand, the District Health Directorate, headed by the district health director, is responsible for setting health priorities within a given

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[32] Source Adapted from (Government of Ghana 1996)

district, in accordance with both general guidance from the regions and the overarching national goals in the area of health. The district health directorate is required consult with the district health committee of which a representative of the district assembly is a member.

As regards the health services at the regional level curative health services are provided by the regional hospitals while public health services are provided either by the District Health Management Teams (DHMTs) or the Public Health division of the regional hospital. At the district level, curative services are provided by district hospitals, although many of these remain mission and faith based. At this level the public health services continue to be provided by the DHMT and the Public Health Unit of the district hospitals.

The District Health Administration (DHA) provides supervision and management support to the sub-districts. Further down, at the sub-district level, both preventive and curative services are provided by the health centres as well as outreach services to the communities within the catchment areas of the health centres. Some basic preventive and curative services for minor ailments are offered at the community and household level by the Community-based Health Planning and Services (CHPS) facilities.

5.4.2   Health Sector Reforms

As part of the Ghana's health sector reforms the health services have been decentralised with the goal of improving access to basic services, quality of care and the efficiency and equity in service provision (Mayhew 2003; Government of Ghana 1995; Government of Ghana 1996). This decentralisation is perceived by some to constitute the third cycle of health sector reforms in Ghana (Asante et al. 2006). Specifically within the health sector, new institutional structures and the roles and functions of the various national, regional and district agencies have been defined in a number of legal instruments covering civil service reform, local government

restructuring and health sector deconcentration. This was as a result of the fact that this period emphasised an overall strengthening of the health system.

The law that established the current form of decentralisation in Ghana was very specific as to the nature and type of the country's decentralisation system. A system of devolution was prescribed and all sectors in the country were effectively to fall under the DAs. Under this DAs were expected to prioritize and allocate district funds to each sector through the District Executive Committees (DECs). This meant that effectively district health services along with all other sectors were to be transferred to the DAs. However, the policy was never implemented as prescribed and health services were never transferred to the assemblies.

Consequently an autonomous agency was established to take responsibility of health delivery from the central Ministry of Health (MOH). The MoH was left with the responsible for policymaking. Service delivery to providers was contracted out and is controlled by the Ghana Health Service (GHS), who did this through the use of regional and district hospitals and non-governmental providers. This resulted effectively in a decentralised structure of the public health system as illustrated in figure 5.2. At the apex of the decentralised health system based on the 1996 Ghana Health Service and Teaching Hospitals Act (Republic of Ghana Act 525) was the GHS tasked with the role of running a decentralised health system with the aim of providing access to basic health services to all Ghanaians as close as possible to where they live and work (MOH, 1996; 1997).

Further down the decentralised stream the Regional and District Health Management Teams and regional hospitals are accorded the status of Budget Management Centres and they have signed performance contracts in place with the GHS. There are District Health Management Teams in each district in the country with sub district structures existing as the next level under these District Health Management Teams. However, some of these sub-district structures are not in place while several have limited capacity.

In terms of the current arrangement the Ministry of Health retains control over staff salaries, budgetary allocations and planning specifications, while staff recruitment is controlled by the GHS. Human resource management in the health system remains one of the more centralised areas in Ghana as delegation of powers to the GHS has done little to change the unified hierarchical structure. Decisions on salaries, hiring and firing, contracting and all other benefits remain at the national level of the GHS (Bossert 1998).

This is, nevertheless, not surprising because, as Kolehmainen-Aitken (2000) points out, in most cases the implications of decentralisation for human resource development in the health sector are largely neglected. This is primarily the result of the complexity involved in decentralising human resource to the lower level as this may require new organisational structures, specifying the linkages, revising job descriptions and reporting relationships, defining new processes for personnel management, deciding how to re-allocate existing staff to new organisational structures and transforming and transferring personnel records and staff members (ibid).

5.4.3 Health Financing

There are four major sources of funds for the health sector in Ghana, namely, transfers to the regional health directorate and the district health directorate from the central government, internally generated funds, National Health Insurance Funds which are also transferred by the central government from the National Health Insurance Authority and donor funds. Currently transfers from the central government account for the majority of the health sector funding. The government share of health expenditure was 54%, 41% and 25% for 2010, 2011 and 2012 respectively, as against donor contributions of 15%, 22% and 11% for the same years respectively. Table 5.3 illustrates that, with the exception of 2012 when internally generated funds exceeded the government share, health expenditures were financed primarily from government funds.

Table 5.3: Sources of health sector expenditures for 2010 to 2012 in USD[33]

Year	2010	2011	2012
Government of Ghana	202,056,916	209,609,505.2	228,577,462.9
Internally Generated Funds	107,309,433	183,715,222.7	241,236,613.4
Donors	56,824,963.4	113,137,693.3	106,108,986.6
Total	374,676,000	509,007,993.3	927,543,716

Source: (Send Ghana 2014)

The funding of Ghana's health sector has also been subject to both deconcentration and sector-wide streamlining as part of the policy reform that increased the coordination of donors through a sector-wide approach (SWaps). There has been significant progress made in deconcentrating the health budgets.

Based on the arrangement above the health budget is divided into the following four items, namely, salaries, which remain under the control of the Ministry of Health, administrative and service cost, which is under the control of the decentralised units, and, finally, investment cost, which the Ministry also controls. Returning to Table 5.3, it is worth noting that a significant proportion of the government share of health expenditures (estimated to be approximately 90%) is spent on remunerating health personnel, thus leaving 10% for other needs such as investment (Send Ghana 2014).

These allocations from the central government are done based on a population-based formula, which is often adjusted in consultations with the regional authorities. The formula contains the following elements, namely, fixed cost of administration, distance to national capital, population density, physical size of the region, facility size and infant mortality rates. In the initial stages these funds were allocated to the regions. The regions then decided on a basis on which to allocate the funds to districts under their jurisdiction using factors such as district population and remoteness (Asante & Zwi 2009).

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[33] Based on exchange rate for April 2013, when data was published of 1.94 Ghana Cedis to the USD (http://www.bog.gov.gh/index.php?option=com_wrapper&view=wrapper&Itemid=298). Did not use purchasing power parity conversion because the study did not conduct any international or cross country comparisons.

Since 1999 when the Budget Management Centre concept came into operation, financial allocations for recurrent budgets now go directly to the districts from central government. Budget and Management Centres also known as or Cost centres are the decentralized functional units responsible for administering Government of Ghana and Developmental Partner Funds.

These BMCs are hierarchically ordered and the national level BMCs supervises regional BMCs, which in turn supervise district level BMCs. There are a total of entire 350 BMC units under the MoH/GHS.

The hierarchical organisation of the BMCs means that money is still channelled through the regional health administrations; though this has significantly improved disbursement times although the budget approval process remains cumbersome. The process requires that all district and regional budget plans are drawn up according to the national guidelines developed by the National Development Planning Commission (NDPC). These plans are then approved against nationally set ceilings and priorities and this tends to delay disbursements. Figure 5.3 illustrates the structure of the health administration and the linkage with the district assembly.

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        ┌─────────────────────┐
        │  REGIONAL HEALTH    │
        │    DIRECTORATE      │
        └─────────────────────┘
┌──────────────────┐           │
│ DISTRICT ASSEMBLY │◄──       │
└──────────────────┘          ▼
        ┌─────────────────────┐
        │  DISTRICT HEALTH    │
        │    DIRECTORATE      │
        └─────────────────────┘
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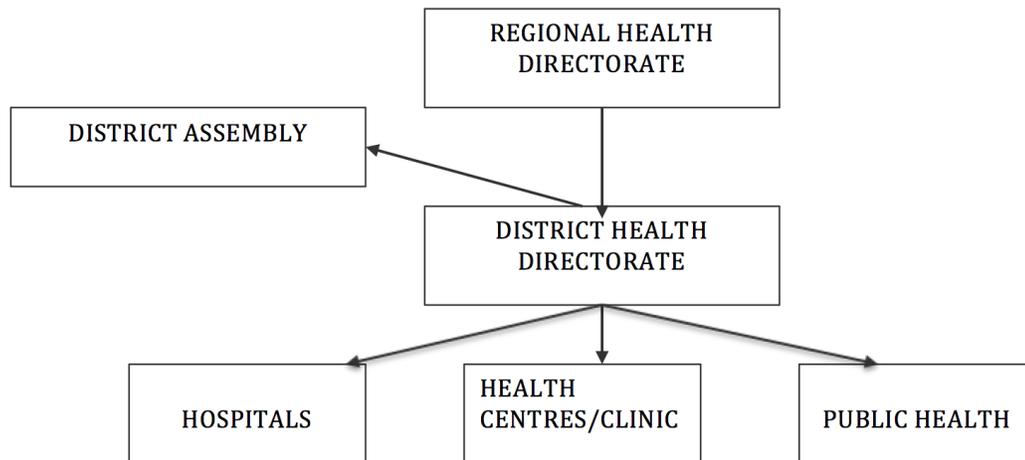
Figure 5.3 Structure of Ghana Health Service[34]

5.4.4   The National Health Insurance Scheme (NHIS)

In a discussion of health sector financing it is important to point out the role and importance of the national health insurance scheme, which currently forms the bulk of funds transferred from the central government. Ghana's National Health Insurance Scheme (NHIS) established by an Act of Parliament (Act 650) in 2003, and passed into law as legislative instrument, LI 1809, in 2004 (Government of Ghana 2004). It is considered as an important home-grown policy. The policy aims to provide universal health insurance coverage to all persons as the country moved away from a user fee system of health financing. The aim was to reduce inequalities in health, ensure equitable allocation of resources and increase the overall resources in the health sector. The scheme itself was the outcome of a series of experiments which had been conducted in the 1990s with a number of community based health insurance schemes as pilot projects (Jehu-Appiah et al. 2011). In 2013 there are 145 registered district level schemes that were overseen and managed by the National Health Insurance Authority (NHIA). These district schemes are mandated to operate exclusively to the benefit of their members. All the schemes have a single benefit

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[34] Source Adapted from (Government of Ghana 1996)

package that has been described by management as covering up to 95% of the disease conditions that afflict Ghanaians (Government of Ghana 2004).

The scheme is funded from three major sources; 2.5% Value Added Tax (VAT) levy, 2.5% contribution from the Social Security and National Insurance Trust (SSNIT) mainly from contributions of public and private formal sector employees and annual premiums paid by registered members of the scheme, mainly informal sector workers (Government of Ghana 2004). Of these three funding sources the national health insurance levy which is tax financed provides the bulk of the funding approximately, 70% of the with between 20% to 25% sourced from SNNIT contributors and user fees making up approximately 5% of the schemes financing(Ghana. 2003).

In terms of benefit package for members, a coverage of approximately 95% of diseases that afflict people in Ghana means that the NHIS has a fairly generous package. The specifics of the benefits includes; general and specialist consultations reviews, general and specialist diagnostic testing such as laboratory investigations, X-rays and ultrasound scanning, and drugs from the NHIS medicines list(Government of Ghana 2004). The scheme also covers a number of surgical, physiotherapy and inpatient services. On oral and dental health the scheme provides services such as; tooth extraction, temporary incision and drainage, as well as dental restoration, including simple amalgam filling and temporary dressings.

In 2008, the scheme was expanded to include free maternal care (See chapter 7 for details). In 2012 the scheme went on to provide for treatment of opportunistic infections for HIV/AIDS (Act 852, 2012). In other to benefit from the scheme all members, between the ages of 18 and 69 must pay an annual insurance premium, set by their local schemes.

The scheme has an exemption policy which excludes specific groups from paying premiums and yet still enjoy the benefits. The following categories of people fall under the scheme's exemption package; all children under the age of 18 years whose

parents both enrol, pregnant women, persons with mental disorders, SSNIT pensioners (60 years and above), and those aged 70 years and above, and the very poor who are defined by the scheme as unemployed with no visible source of income, no fixed residence, and not living with someone who is employed and with a fixed residence (Government of Ghana 2004). Formal sector employees under the Social Security and National Insurance Trust (SSNIT) are also exempt from premiums as their 2.5% of their SSNIT contributions are deemed as insurance premiums and paid directly to the scheme through the National Health Insurance Authority (NHIA). However, in other to use the scheme these SSNIT contributors are still obliged to pay an annual registration fee, which is also determined by the local health insurance scheme.

5.5   State of Health Sector Decentralisation in Ghana

5.5.1   Is Ghana's Health Sector Decentralised?

A major objective of this study was to understand fully the case for health sector decentralisation in Ghana and the exact form it was to take. The existing literature on health sector decentralisation defines it as the transfer of powers from a central authority (typically the national government) to more local institutions(Levaggi & Smith 2005). One of the most popular applied approaches to defining decentralisation in health care is the public administration approach which is summarised in the often-cited, four-part framework which includes delegation, deconcentration, devolution and privatisation (Rondinelli et al. 1983) While some countries choose to devolve responsibility to the lower political levels, others choose deconcentration to lower administrative levels within the central government. This may also take the form of delegation to lower level, quasi-independent, governmental entities such as hospitals which are structured as public organisations and also to non-governmental agencies.

Health care decentralisation may encompass most of the functions within the health care system. The only function that is often left untouched by decentralisation is strategic planning and policy making within the sector and this usually remains the domain of the central government. Thus, a formal definition of decentralisation in health system may be as follows "The transfer of formal responsibility and power to make decisions regarding the management production distribution and/or financing of health services, usually from smaller to larger number of geographically or organisationally separate actors"(Saltman et al. 2007). Thus, according to this definition the health sector in Ghana may be regarded as decentralised as it includes elements of deconcentration, delegation and even devolution. The responses of the interviewees and the literature on decentralisation in Ghana provided the motivation for the deeper probing of the status of health sector decentralisation in Ghana.

During the interviews the respondents were asked directly whether the health sector in Ghana was decentralised. The complex nature of the responses to this question revealed how complicated the status is of the health sector decentralisation. While a majority of responses indicated that the sector was, in fact, decentralised these answers were almost always followed with a "but". It emerged that 27% of the participants were of the view that the health sector was not decentralised as against the 66% who felt the sector was decentralised. The three main themes were identified from the discussions – Each category had its reasons.

a. A fully decentralised health system

Although 66% (14) of the participants stated that the health sector was decentralised, 13% (3) only stated this without any doubt, believing firmly that the health sector was the most effectively decentralised department within the national system of decentralisation. It should be noted that these respondents were all from within the health sector and included senior management staff at the Ministry of Health and the Ghana Health Service. One of these respondents stated;

The health sector is the most fully and effectively decentralised unit with structures and trained personnel. It just needs to be unified with the district assemblies.

National Officer 04

Those respondents who believed that the health sector was the most effectively decentralised unit also argued that decentralisation should go beyond the "so called" transfer of power and that it is only in the health sector that local capacity has been strengthened. In addition, the health sector has invested in structures at the local level to improve local managerial capacity. These respondents presented the case that the health sector currently transfers the bulk of its funds to be dispensed at the local level (an estimated 35%) and that the health sector aims to increase this to 45%. According to them the only gap in the health sector decentralisation was where to position it effectively in the national decentralisation process so as to ensure effective collaboration between the sector and the district assemblies.

A lot of people think that the health sector is fairly decentralised. This is because, as part of our health sector reforms, we concentrated on financial decentralisation and we also concentrated on ensuring that districts have their own plans and they also own their own performance. So, we have put in place mechanisms that will allow districts to plan and have access to their own funding and they can also generate their own funding. We have also put in place mechanisms that would ensure that districts can define their own performance, report on their own performance and also own their own performance.

National Officer 03

b. A Partial/Incomplete Decentralisation

The majority of the participants, namely, 53% (11), although stating that the health sector was decentralised, provided various reasons why they deemed the decentralisation to partial or incomplete. They argued that full decentralisation of

the sector would be attained if the current decentralised structure that operates within the sector were unified with the devolved district assembly system. They felt that very few amendments would have to be made as the health sector structure already exists and works in the current form. It only remains for this structure to be owned at the district level. The narrative cited below provides a view of this perspective;

> *Health and education have always been deconcentrated. By the nature of the service they deliver they have to be deconcentrated, so the whole idea of the decentralisation was to devolve power to those at the lower level, indeed, at the district level.*[35]

> *National Officer 06*

This narrative points out that, although the sector is deconcentrated, the current structure continues to defeat the aim of the current decentralisation programme, namely, to bring these services closer to the local people. The fact that the current system includes a combination of deconcentration and devolution operating within the same system often means that is unclear where responsibilities lie and how these two systems should coexist. In addition, in this situation cooperation or coordination between these two units is arbitrary is completely removed. In fact, it is believed that this would be possible only if the health sector were part the devolved system of local government although many of the respondents are sceptical about the ability of the local government to manage the health sector. Others respondents who agreed that the sector was decentralised were of the opinion that the system was working extremely well, primarily because the health sector had put in place several structures to ensure that the decentralised structure worked. They maintained that the health sector is one of the most effectively decentralised units in the country but that there is a need to be cautious about bringing the sector within the structures of the district assemblies as the assemblies may not yet be ready for this, arguing that the assemblies lack the capacity to manage the health sector.

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[35]Author's fieldwork

c. A Health System not Decentralised

The seven participants who argued that the health sector was not decentralised presented two main arguments in support of this view. They argued that, although there has been significant deconcentration even within the health sector structure and funds are made available to the district health directorate, these funds are often transferred with specific directions as to how they should be used, while the centre – the Ghana Health Service continues to make decisions about and plans many of the health programmes. The district directorates are allowed only to effect minor modifications to ensure the proper implementation of such programmes in their districts. Thus, these seven participants argued that this is not decentralisation as the major decisions are all taken by central government.

In a comparative analysis of health sector decentralisation in Ghana, Zambia, Uganda and the Philippines, Bossert and Beauvais (2002) pointed out that the structure of the GHS as a national council ensures the supervision and a high degree of centralised control over the regions and the districts. Bossert and Beauvais (2002) term this "decentralised centralism". They further point out that this system leaves little or no room for local governance or popular participation in health sector decision-making. Ayee (2002) contends that, while district administrations were represented on the District Health Committees, their role was deliberately limited to advising the GHS and may, at best, be described as minimal. A number of researchers have also conclude that district administrations do not play a significant role in health sector governance (Crawford 2008; Crawford 2004; Mayhew 2003; Ayee 2008; Bossert & Beauvais 2002; Bossert 1998). This situation stems from the overall structure (see Figure 5.2) of the GHS as, while the GHS is deconcentrated, its regional and district directorates are overseen by the national council, which also has the responsibility of appointing the directors at each level. Thus, reporting to and being directly under the oversight of the national council, which appoints the members of the GHS, leaves little room for autonomous decision taking at the regional and district levels.

The second major argument is the fact that the current structure of decentralisation within the health sector is contrary to what is clearly stated in the constitution, which categorically mandates a devolved structure for Ghana's decentralisation. The respondents who presented this argument cited the decentralisation law, the Local Government Act 1993, in support of their argument. The quotation below from the Consolidated Local Government Bill 2013 sheds further light on this issue.

> While the Local Government Act, 1993, Act 462, included the Ghana Health Service, the Ghana Education Service, the National Fire Service and the Department of Fisheries Forestry and Game and Wildlife in the list of decentralised departments, the Local Government Service Act, 2003 Act 656, excluded them from the schedule of decentralised departments. This has become a major challenge for practitioners on the ground to deal with (Government of Ghana 2013b, p.3).

These respondents who are of the view that the sector is not decentralised maintain that, as long as the health sector maintains it deconcentrated structure – which they feel is contrary to the devolved structure mandated by the constitution – and its strong ties with the central government, thus not falling under the district assemblies in all aspects of its operation, it is not possible to see the sector as decentralised.

5.5.2 Motives for Health Decentralisation in Ghana

The study also sought to ascertain the main motives behind decentralisation in the health sector. The decentralisation processes in the health sectors of the developing countries have many objectives and are generally said to be aimed at improving the efficiency, equity, accessibility, and quality of health service delivery as well as the responsiveness of the health service to local needs and, ultimately, improving the health of a country's population (Levaggi & Smith 2005; Jimenez & Smith 2005; Smith et al. 2008). Generally the economic rationale for decentralisation in health

care focuses on both health system efficiency and on accommodating a diversity of preferences for government services (Oates, 1972). According to documents on decentralisation in Ghana, the objectives of the health sector decentralisation are to ensure equity, efficiency, quality and financial soundness (Ministry of Health 2014; Ghana Health Service. 2011; Ministry of Health 2007). Based on the data from the interviews and the literature review, the responses were broadly categorised into general thematic categories of economic, political, social and administrative. The more specific sub category headings are discussed below.

a. Political Motives

    i.   As a tool to enhance local participation in decisions pertaining to health

The vast majority of the responses of the interviewees pointed to the need to ensure the local participation in decision making that would enhance the governance and democracy of the health sector specifically and also, in general, as the major motive for decentralisation.

    ii. A global political arrangement

Another important political argument that was raised was the global importance of or push for decentralisation. The participants alluded to the fact that decentralisation itself was included in the reforms of the Structural Adjustment Programme[36] in Ghana and that donors had pushed for the policy to be implemented. A respondent in interview comment below pointed this out:

> *One of the key reasons for that is that, as part of the health sector reforms, we actually made it an indicator of performance under the health sector reforms and that over 43% of our budget should be shared at the district level. So we actually push money there and make sure that the regions do not touch it and that is how come we are able to roll out. And because it was an indicator our partners held us to it and they are still holding us to it. Before*

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[36]See Chapter two on the political economy of decentralisation

they even disburse funds they want to see that indicator as being achieved so that, apart from capacity building, we also made sure that we gave them the resources.

National Officer 03

This above narrative highlights powerful global interests in the decentralised health system, indicating that donors who contribute to the health sector budget regard the financial decentralisation of the sector as a key indicator of the sector's performance.

iii. A means to improve national governance and overall democracy

The interviews also revealed that decentralisation was also crucial at the point in the nation's history when the country was moving from a military regime to a democratic dispensation. Decentralisation would ensure that the people at the local level felt that they were a part of the new system and that true democracy prevailed. This is obvious in the following response of one interviewee;

Improve governance of all sectors and local democracy as we moved from a dictatorial to a democratic system.

National Officer 06

In explaining this view another respondent noted that

Ghana at that period was moving from a military regime to constitutional rule and local democracy was part of the agenda.

National Officer 07

The participant further argued that, in the process of democratisation after a long period of military dictatorship (1981–1992), decentralisation, which ensured local participation in decision making and a strengthening of the local authorities as an important level of government as regards improving service delivery, governance, and local democracy, was a crucial element in the democratisation process.

iv. Local participation in development and governance

Other respondents cited the need for the local ownership of polices and a local content in the implementation of policies as a motive for decentralisation. Finally the accessibility argument was presented when a participant pointed out that a major motive for decentralisation was to ensure that services were brought nearer to the local people.

> *Supposed to bring governance to the doorstep of the local people so that they will participate in development because someone cannot sit somewhere and you will know what they need.*

> *District Assembly Officer 06*

b. Economic Motives

i. Enhance equity in the health system

All the participants interviewed were of the view that equity was a major motive for health sector decentralisation. This view of the participants was further corroborated by documentary evidence that explicitly cited equity as a goal of the decentralisation process. The respondents stated that the aim of decentralisation was to improve equity in a number of dimensions including equity as regards access to health as well as equity in health care and the utilisation of health services and also to address inequity in health resources allocations.

ii. Improve efficiency in the health service delivery

A second economic argument that was presented by the respondents as a major motive for decentralisation was the fact that decentralisation was important in order to increase efficiency in the delivery of the health services. The respondents believed that, by bringing these services closer to the people through decentralisation, local management and the local people would be able to identify the sources of inefficiencies in the system more quickly than would otherwise have been the case

and eliminate such inefficiencies before they took root in the system. They also believed that the level of engagement on the part of the local people that decentralisation would bring would substantially promote and encourage overall efficiency in the delivery of the health services. This argument is linked to the issue of accountability.

iii. Provide innovative solutions

Other economic arguments presented for in favour of decentralisation were generally in line with improving performance, enhancing efficiency, improving health service delivery and enhancing equity, especially in the area of health resources. Another argument cited was that of the decentralised units being enabled to access funds available from all sources.

iv. Provide information on unique local situation/s and knowledge of local preferences

The respondents were of the view that ultimately realising many of the aims and goals of the national policies, including the decentralisation policy, lay in the access to and availability of information on local issues. They argued that the past failure of many of the policies has been the result of the lack of access to information on both the local situation and the local preferences (see below) and that it is not possible for remote national governments to all the opportunities and constraints that affect the supply of local services. This lack of information affects all aspects of the management and the provision of services and often leads to managerial solutions that are inappropriate for local circumstances. These information gaps may be as simple as the signing of local contracts or information on historical patterns in disease and even how local residents have reacted to past policies.

The respondents maintained that local management in a decentralised system was better placed to understand and respond to local preferences in the design of services and that this would ensure that service design reflected local priorities. They argued

that, although the all regions belonged to the same country, unique features and peculiar characteristics often resulted in the failure of policies to realise their stated goals if these unique features and peculiar characteristics were not taken into account.

v. Enhance cooperation and local coordination to achieve a unified approach to development and poverty reduction

The participants argued that development and poverty reduction must happen simultaneously for every member of the society or they would be unsuccessful. They believed that decentralising the health sector would open up the sector to a wider scope for consultations to find solutions to problems within the sector, both locally and even at the national level. In addition, they believed that this would, in turn, result in a wider collaboration between the local government system and its members and the local community than would otherwise have been the case.

d. Administrative Motives

i. Support human resource motivation

A more specific motive that was voiced during the interviews was the need to provide support for human resource motivation. The participants indicated that the supply of health human resources is a major challenge facing the health sector in Ghana. These human resource supply challenges are exacerbated by the fact that majority of the health personnel are not motivated to work in remote and deprived communities. In the view of the officials interviewed a major consideration in the design of the decentralisation policy was to provide a solution to the issue of the lack of motivation of health workers as regards working in the distant, deprived and remote parts of the country. A local solution may be the only option as the national level has failed to solve the problem, all the attempts and a number of policies. However, the health officials interviewed admitted that, to date, no attempt had been made to decentralise the health human resources (recruitment and motivation). The

participants believed that the health human resource motivation had been a major motivation in the decentralisation process and that it is one area that decentralisation could help to improve significantly.

5.6　Nature of cooperation between district assemblies and the health sector

The existence of the two strands of decentralisation in some major sectors, including health and education, and which, in the case of the health sector, had been created by the delayed take-off or full implementation of the health sector decentralisation programme, has meant that the ability of the decentralisation process to realise its specified objectives in terms of the health the sector has been heavily dependent on the level of cooperation/collaboration between these two systems. Currently there are two lines of responsibility in the decentralisation process in Ghana.

These include the devolved public services, such as the construction and maintenance of feeder roads and the delivery of relief and sanitation services, and development planning which is entirely the responsibility of the district assemblies. Another category includes the delegated public services which may be delegated directly by the central government, ministry concerned or an agency. In the instances of these delegated services the DAs act as agents of either the central government or the agency to which authority has been delegated but without significant discretionary power in these services. These services comprise primarily health, education and water and sanitation. In the area of health specifically the district assemblies support the provision of public health services in consultation with the Ministry of Health and through the Ghana Health Service as the implementing agency. However, this has often been cited as the main factor influencing the poor outcomes of decentralisation in the health sector and the weak co-operation between the district assemblies and the district health directorate. The district assemblies make every effort to coordinate with the district health

directorates. However, this is difficult as the Health Directorate maintains reporting lines to the regional and national offices.

The district assemblies interviewed admitted that, in drawing up medium term district development plans, they often consulted the District Health Directorates to include health-specific issues after they had made every effort to capture the issues of the local citizenry. They admitted, however, that, since health issues are highly technical, they had to rely heavily on the inputs from the District Health Directorate in compiling district health priorities. However, most often than not the assemblies discovered that these priorities stemmed from national health policy directions rather than specific district level health issues. A district officer interviewed revealed that health priorities are set in consultation with the District Health Directorate and, in actual fact, the district assemblies merely include in their plans the priorities provided by the district health directorates.

> *Yes, the district has set health priorities but what we normally do is that, the health division, they will prioritise their needs and then they will give it to us. They prioritise their needs – they have their plans which they receive from the headquarters so, at the end of each year, like getting to November, they have to bring their plans and we will also incorporate it into our district plan.*

> *District Assembly Officer 02*

The implementation stage follows the priority setting stage. However, it would appear that the District Assemblies generally tended to adopt a hands off approach to implementation, choosing to rely on the technical abilities of the District Health Directorates. For the assemblies the technical nature of the health sector and the dual reporting lines meant that, if assemblies become involved in health matters, they would be perceived to be interfering in the work of the Health Directorates. A participant from the Ga South District succinctly stated

The only problem has to do with the fact that they have two reporting lines; they report to the Assemblies and their mother agencies (Ghana Health Service) so, because of that, that strong will of the Assembly taking full responsibility for their activities is not there. We are not fully accountable for their activities in the municipality for now.

District Assembly Officer 04

In many instances the District Health Directorate regards the district assemblies as a last resort for support in a situation in which the funding from the regional directorates proves inadequate. This is primarily as a result of the fact that the health directorates perceive the district assemblies as unwilling to support them financially and they have often had numerous financial requests turned down by the assemblies. A respondent from the District Health Directorate expressed the following views on the situation;

The Assembly has not provided any support to us even though they know money has not come from government yet. We have discussed this with them so many times. When we came we didn't have furniture and even an office to sit. We were only lucky they had once built a structure there to be used as a laboratory and that is what we are occupying now. The last encounter we had with them was about this National Immunisation Day. We had some money so we recruited a lot of volunteers. The money given to us was just something small so we wanted them to support us to at least motivate the volunteers to do the work. They have taken the memo on the request and everything, according to them, they have sent it for endorsement at the regional level but, up till now, we have not received anything and the volunteers are still following us.

District Health Directorate Officer 04

Another perspective on the matter is the fact that the health directorate admitted that, even in the rare instances in which the districts they may be ready to finance activities, the districts often appear to be extremely biased in favour of spending money on the construction of physical buildings and structures rather than financing health programmes and projects. The health directorate attributed this to the political nature of the assemblies with the[37] clientelist nature of local politics requiring physical evidence of development.

The district assemblies also argued that the health sector is adequately funded from the central government while the funds available at the district level are limited. In view of the fact that the health directorates often do not share with the assemblies information about of their funding, including how much they have received and the gaps they had to fill, this makes it difficult to redirect funds for meeting pressing local needs to servicing the health sector.

In addition, the health directorates regard their reporting and monitoring functions and their links with their regional offices as superseding their reporting responsibilities to the districts and, thus, they tend to neglect their reporting to the districts assemblies. It would also appear that the district assemblies are merely copied on reports submitted to the regional health directorates. The district assemblies routinely participate in district health management meetings but also admitted to limited decision making responsibilities as regards health issues as they viewed such issues as technical in nature and, thus, better left to the experts in the district and regional health setups.

5.7   Chapter Summary

In a bid to improve the decentralisation process, the decentralisation policy has undergone a number of significant reviews and amendments in all aspects since its formalisation into law. These processes have aimed at refining and improving the process of decentralisation and, ultimately, ensuring that both the policies and their

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[37]This is discussed into more detail in Chapter 7

implementation incorporate local content. This, in turn, has invariably led to the intensification of the national decentralisation programme.

However, some major concerns have remained unaddressed, namely, the districts' concerns with funding inequalities, the status of the decentralisation of the health and education sectors and the concerns of several districts, especially rural districts, as regards securing their financial base.

While the health sector views itself as highly decentralised with its deconcentrated structure the sector continues to remain outside the devolved system of the district assemblies. The 1993 Local Government Act envisaged the health sector decentralisation as the devolution of the responsibility for the district health services to the district assemblies. However, the passing of the Ghana Health Service (GHS) and Teaching Hospital Act (1997) brought about a conflicting situation with the GHS becoming responsible for running the decentralised health services. Thus, whereas the Local Government Act envisioned the health sector as competing with other sectors for decentralised funds, held by the Ministry of Local Government at the district level under the 1997 Ghana Health Service (GHS) and Teaching Hospitals Act (Act 650), the Ministry of Health retains financial autonomy.

The chapter highlighted that decentralisation is a multidimensional concept and that, even with the passing of a law declaring a sector to be decentralised, there are still conflicting varying views of what decentralisation is and it remains a problem to formulate a simple definition of the term 'decentralisation'.

The main issue in the area of the health sector decentralisation is how to effectively link the deconcentrated structure of the health sector to the current, devolved local assembly system with clear guidelines and institutions in place to ensure the assembly and the health directorate are able to work together seamlessly. In terms of the current structure the regional level remains important in the decentralised health system although the regional level does not play a significant role in the devolved district assembly structure.

Chapter 6

Inequities in Maternal Health Utilisation: Measurement and Decomposition

6.1   Introduction

This chapter contains a quantitative examination of the health inequalities in Ghana. The chapter first describes the analysis which was conducted in inequalities in the health resources between districts in Ghana using data from the Ghana District Assemblies Common Fund. This is followed by a descriptive analysis of the inequalities in maternal health utilisation and selected maternal health variables. Inequality curves and indices are then estimated using two rounds of the Ghana Demographic and Health Survey (GDHS), which provides data on the changes in maternal health inequities in Ghana.

The chapter uses two unique sets of variables in terms of which to assess inequities in health resources at the district level (section 1) and inequities in maternal health utilisation at the individual level (section 2). The chapter first discusses inequities in a number of health resource variables at the district level using data available from the Ghana District Assemblies Common Fund. The resources analysed include health facilities, doctors and nurses.

The chapter then continues to examine health inequities using micro data inequities in selected maternal health variables. This commences with an examination of certain variables for the analysis, the importance and techniques to use in dealing with missing variables in the dataset. The chapter then provides a summarised description of the variables to be used in the estimation and descriptive analysis. This is followed by a detailed analysis of health inequities at the household level by indirectly computing need standardised health inequality indices for the selected maternal health utilisation variables. This is followed by a decomposition analysis of the computed indices. In addition, the chapter also presents the statistical tests and model diagnostics used in the study.

SECTION 1: District Level Inequalities in Health Resources

6.2: Inequalities in Health Resources

It was pointed out in Chapter 3 that, in any analysis of health inequity, the question of the way in which resources in health are distributed requires further probing. This section attempts to do this by analysing inequalities in selected health resources at the district level. The section uses data from the District Assemblies Common Fund (DACF) records to conduct an inequality analysis of the selected health resource variables.

The data provides records of district land size, district population, total health facilities in the district, number of key health personnel such as; doctors and nurses, as well as data on district revenues. The analysis of health resources focuses on district generated revenues and not on transfers from the central government other sources, mainly because it seeks to provide an accurate assessment based on the fiscal strength and the prevailing inequalities of the districts. The variables of interest include healthcare health facilities and number of doctors and nurses. Thus, the analysis of inequities in health resources at the district level measures inequality in the per capita values of these resources using the concentration indices[38] across the districts.

A major aim of the health system in Ghana is to ensure equity in the use of and the accessibility to health in general. If this is to be achieved it is essential that to ensure some degree of inequity in the distribution of health resources. However, the equitable distribution of health resources continues to be constrained by a number of factors and districts experience unequal levels of distribution on an ongoing basis.

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[38]Other indices such as the Gini and Theil were used. However, the concentration index was presented Where? because, although the general trend remained unchanged, the concentration index provided a gradient which enabled a conclusion to be drawn as to whether the inequalities were in favour of either the rich or the poor.

6.2.1   Summary of Data

For the purposes of the district level analysis the analysis uses data on 216 districts; district size, district population estimates, revenues, number of doctors in the district, number of nurses in the district and the total number of health facilities in the district as indicated in the DACF records. Table 6.1 below presents a summary of the data used for the districts. The table reveals that the districts vary significantly in features, both in terms of landmass, population and population density and in terms of revenues and health facilities.

Of the 216 districts in Ghana, the average area for a district is approximately 1,186 square metres. However, one district covers 9,528 square metres, thus indicating the wide variation in size of the districts by area. This wide variation is not restricted to area only for the population size of the districts also varies widely with the largest district having a population of 1,810,000 and the smallest a population of 42,364. The magnitude of the variations in district size and population means that an analysis of any resources at the district level must include a means of controlling for the demand on the resources, given the service pressure as indicated by either the population to be served or the need to ensure that people do not have to travel vast distances in order to access basic services in the larger districts.

Accordingly, in order to ensure these are taken into account the health resources are converted into per capita values and district area is included as a size variable in the computation of the index.

Table 6.1: Summary of district level data[39]

Variable	Observation	Mean	Std. Dev.	Min	Max
Area	216	1186.04	1439.28	74	9602
Population (2010)	216	1089645	3014154	42,364	1,810,000
Number of Health Facilities	216	12.10	6.041039	3	40
Doctors	216	5.23	21.48	1	261
Nurses	216	46.64	143.8458	1	1,778
2010 Revenues	216	235,081.29	622,423.20	0	6,082,474.23
2011 Revenues	216	363,476.86	1,389,962.37	0	15,876,288.66

Source: Author's own computation based on data from the DACF Formula 2013 Report (Government of Ghana 2013a)

6.2.2 Overall Inequity in Health Resources

The three health resources investigated all demonstrated a pro rich inequality, that is, there was a greater availability of the health facilities in the richer districts with the inequality being highest as regards the distribution of nurses. The analysis also indicated that the distribution of health facilities was generally better than the distribution of health human resources as the two measures of human resources used show significantly higher levels of inequality as compared to health facilities as indicated by the concentration index values of 0.29 and 0.32 for doctors and nurses respectively.

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[39] Although all previous financial data has been converted into the USD values for ease of understanding (Chapter four) have been maintained in Ghana Cedis they are used in regression analysis and the exchange rate had no bearing on this.

Table 6.2: Overall inequality in per capita health Resources[40]

Category	Estimate	STE	LB	UB
Facilities	0.084	0.03	0.03	0.14
Doctors	0.29	0.04	0.21	0.37
Nurses	0.32	0.03	0.25	0.39

Source: Author's own computation based on data from the DACF Formula 2013 Report

It must, however, be noted that, although the inequality as regards the health facilities appeared to be relatively lower, the quality and types of these facilities varied between the districts and the bracketing together of these health facilities does not necessarily provide an accurate depiction of the actual situation. Health facilities in Ghana are categorised as public, private not-for-profit and private self financed health facilities. Private facilities include hospitals, maternity homes, clinics and chemical sellers. It must be noted that this analysis was been conducted at the level of public health facilities only. These public facilities also vary significantly in terms of quality and include a variety of hospitals under the auspices of the Ghana Health Service, for example, community health planning services (CHPS) compounds, small clinics, district hospitals, 10 regional hospitals and autonomous teaching hospitals.

Primary healthcare in Ghana has been structured according to the need and priority to serve communities. Rural areas that are severely lacking in permanent health infrastructure have been prioritised as regards the establishment of CHPS that provide clinic based, primary health care and reproductive health services. These compounds are run by community health officers and the services provided include immunisations, family planning, supervising delivery, antenatal, postnatal care, treatment of minor ailments and health education (Nyonator et al. 2005).

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[40]Computed at 95% confidence interval

However, in the cases of health workers the distribution showed even wider inequalities, with index values of 0.29 and 0.32 respectively for doctors and nurses, thus indicating that many of these health facilities are without the necessary staff. In an interview at the District Directorate of Health Services in the Kunbungu district assembly, a rural district in the Northern Ghana, the respondent asserted that

> *We just created two new CHPS compounds. Though we do not have the staff but the people also need the services. Since so we created them and sent some people there we have been able to acquire some basic equipment for them.*

> *District Health Directorate Officer 04*

This statement confirms the reason why the situation, where the seems health facilities show a better distribution as compare to doctors and nurses persists and reveals that the existence of a health facility does not necessarily imply that the facility is equipped with the resources required to operate. Even in staff members are sent to these facilities many of them do not remain there for long.

6.2.3   Inequity in Health Resources by Revenue Quintile

Table 6.3: Concentration Index for health resources by revenue quintiles[41]

Quintile	Category	Estimate	STE	LB	UB
1	Facilities	0.25	0.06	0.12	0.36
	Doctors	0.30	0.06	0.17	0.43
	Nurses	0.27	0.08	0.11	0.43
2	Facilities	0.20	0.06	0.07	0.32
	Doctors	0.32	0.08	0.16	0.48
	Nurses	0.33	0.07	0.20	0.47
3	Facilities	0.23	0.05	0.12	0.33
	Doctors	0.22	0.08	0.06	0.37
	Nurses	0.26	0.07	0.11	0.40
4	Facilities	0.11	0.03	0.04	0.19
	Doctors	0.17	0.06	0.05	0.29
	Nurses	0.01	0.06	-0.12	0.14
5	Facilities	0.02	0.05	-0.08	0.13
	Doctors	0.14	0.11	-0.07	0.35
	Nurses	0.03	0.09	-0.15	0.22

Source: Author's own computation based on data from the DACF Formula 2013 Report (Government of Ghana 2013a)

In further investigating the extent of the inequalities Table 6.3 provides an analysis of the distribution of the health resources in question by district revenue quintiles. The quintiles are generated in order to understand the relationship between the

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[41]Computed at 95% confidence interval

inequalities exhibited and the revenue strength of districts. The districts have been divided into five subgroups (quintiles) depending on their per capita revenues[42], with each quintile representing 20% of all the districts. The positive values of the indices computed show that, consistent with the overall national trend, the health facilities in question are available to the richer districts. The general downward trend of the index values as we climb up the revenue quintiles also depicts a situation in which, in the main, the richer districts demonstrate lower levels of inequality in the terms of health resources as compared to the poorer districts.

The two lowest revenue quintiles consistently showed the highest inequalities of 0.30 for doctors and 0.27 for nurses and 0.32 for doctors and 0.33 for nurses in the poorest and poor quintiles respectively. The exception was the situation of the health facilities where the level for the middle quintile was worse than that for the poor quintile. It would appear that this stems mainly from the fact that, in the poor but less deprived districts, it is difficult to retain the services of the health workers assigned to such districts and, even should they take up the positions, many of these workers do not stay for long.

Thus, the ability to retain the services of such workers in a given deprived district is heavily reliant on the policies put in place at the district level to ensure that, should these districts obtain the services of health workers, such workers are prepared to stay the duration. Two respondents from the Shai Osu-Doku district and the Kumbungu district explained that these two districts had used similar approaches but with mixed results. These districts had ensured that students from their districts who were interested in careers in the health services were supported in the hope that they would return to serve in the districts.

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[42] Quintiles are computed based on the internally generated revenues (IGR) of districts for 2013

"Because our district is more rural the turnover rate of staff is high such that when you post[43] teachers, nurses and doctors they find it difficult to stay, especially in the more deprived areas"

District Assembly Officer 02

We support health workers in tertiary education and, when we do it, we bond them so that, when they complete their studies, they come back. But most of the time when we bond them because it is a rural place they do not want to come back.

District Assembly Officer 06

In the first extract a district officer points to the fact that the rural nature of the district often means that, when staff members are allocated to the district, they do not come to take up their postings. This situation is even worse when the specific duty post of the staff is in the deeper, more rural sections of the district. The second respondent stated that his district has even gone as far as financing the training of health officers and bonding them to the district for a number of years. However, even under this system of bonding, the officer argued that many trained health officers refused to come back to the rural communities.

SECTION 2: Inequities and Inequalities in Maternal Health Utilisation

6.3   Summary of Data

6.3.1   Selection of Variables

In order to assess the inequalities in maternal health utilisation indirectly standardised inequality indices were computed at the household level. The index

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[43] In Ghana the education of most health sector and education sector staff members is heavily subsided by the state. These categories of staff are also guaranteed jobs after the completion of training through a posting system. The posting system is managed at the central ministry level and, in the case of health and education, is delegated to the Ghana Health Service and the Ghana Education Service. All medical professional and teachers who have completed their training in a given year under public funding are posted throughout the country.

computed was standardised and controlled for the effect of; age, health status, body mass index, educational level and employment status. These variables were selected based on both a detailed study of the literature on socioeconomic inequalities in health, both at the global level and with specific focus on Ghana (Abor et al. 2011; Arthur 2012; Obeng et al. 2006; Nyonator et al. 2005; Addai 2000) and also on the principal components analysis in order to explore the determinants of maternal health care utilisation for both rounds of the GDHS. The membership of the national health insurance scheme was identified as an important confounder, however due to the unavailability[44] of adequate data in both rounds of survey used this variable was dropped. The study used two rounds of the GDHS data, based on an increase in the intensity of decentralisation (see Chapter 5). The decentralisation reforms over the years have been intensified in terms of more responsibility for development transferred to the local levels, an increase in the number of districts and an increase in the financial base of districts in the hope of significantly improving the overall outcomes.

Another major consideration was the level at which the quantitative analysis was to be conducted – either at the district assembly level or at the regional level. The mixed/incomplete nature (further discussed in Chapter 7) of the decentralisation process presented a challenge to determining the level at which the micro level analysis of health inequities should be conducted (regional or district). The law on decentralisation prescribes the devolution of a number of key functions to the districts assemblies. However, Ghana's health sector remains a delegated system within which the highly centralised structure of the Ghana Health Service is deconcentrated. This, in turn, implies that, although the importance of the region in the overall devolved structure of the districts has been reduced, within the health sector the regional level remains extremely important. The role of the regional hospitals and the fact that not every district has a district hospital reinforces this conclusion (see Chapter 5).

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[44] NHIS variable was not included in the 2003 survey as the scheme had just been introduced and though was available in the 2008 survey majority of the participants had not registered.

A number of actions were taken to overcome the hurdle that the incomplete nature and manner of design of decentralisation may pose to the study the research adopted two approaches. Firstly, the research design used in the study took this into consideration and this is the reason why the researcher chose a mixed methods design which would provide complementary qualitative data from all levels. In addition, although subject to data availability, the quantitative analysis was conducted at both the district level and the regional level. Thus, the analysis of the inequities in health resources, for example, focused on the district level, examining three health resources; the number of health facilities, the number of doctors and the number of nurses. On the other hand, the micro level household analysis on the inequities in the utilisation of maternal healthcare services was conducted at the regional level.

6.3.2 Variables

The GDHS dataset provides a unique opportunity to fully investigate the socio-economic disparities in the health sector as it provides an array of socioeconomic and health variables. The variables below were used in the econometric analysis. Additional data required was computed from the survey data.

a. Outcome Variable

a. *Health utilisation variables:* The major health utilisation variable of interest for the purposes of this study was the antenatal care use. A descriptive analysis provided a presentation of an additional maternal health variable, namely, delivery services. Antenatal care, as defined by the survey, refers to a pregnant woman going for consultations on the condition of her pregnancy before childbirth. It is important to note that the woman need not necessarily be ill in order to distinguish the use of antenatal care as opposed to the general use of health care facility for illness or injury. This, in turn, ensures that antenatal care visits are not counted twice.

b. Independent variables and control variables

The study controlled for other variables that influence the dependent variables. For the purposes of this study the independent variables were grouped as follows;

Need variables; The following variables from the survey proxied health care need, age, whether or not respondent had used a health facility, Body Mass Index (BMI) which has been found to be related to the use of maternal health care services.

Socioeconomic variables: These variables included level of education, employment, economic status and Wealth index which was computed using an asset index derived from Principal Component Analysis (PCA).

Other variables: included region of residence and religion.

6.3.3 Treatment of Missing Variables

Missing variables are extremely important in research as they may lead to biased outcomes, decrease the statistical power of the data set and, finally, complicate the processes that must be carried out in order to analyse the data (Acock 2005; Tanguma 2000). When examining the missing variables in a data set it is important to identify and understand the codes for the missing variables in the dataset. These codes help the researcher to understand a particular missing variable and, thus, to determine the treatment of that variable. These codes may include codes for (a) Unable to answer, (b) Unwilling to answer (c) Not applicable as a result of a valid skip pattern in the questionnaire, or (d) Data entry failure/interviewer error. In the case of the GDHS these are all indicated as missing. Other special responses and codes that may signify absence in the GDHS include "Inconsistent," "Don't know," and "Blank" or "Not applicable." "Missing," "Inconsistent," "Don't know" and "Blank" codes are excluded when calculating statistics such as means or medians; otherwise they are treated as real values (Ghana Statistical Service 2009). Missing variables and response rates are important because a high non-response may affect the reliability of the results.

In this type of survey datasets, for example, the GDHS, non-responses occur for two main two reasons. Firstly, there is a respondent's unwillingness or inability to answer a given question and secondly the data entry operator's failure to enter the data for that particular question. In such a case the variable is deemed to be a genuine missing variable. In a situation in which the question was not applicable, this is picked up by given the skip pattern of the questionnaire. Not applicable questions are not regarded as missing and not included in the analysis. If a question was not posed to a particular respondent it is regarded as a missing variable. The GDHS does not impute values for missing values and defines them strictly as variables that should have a response but which do not have a response because of the following two reasons: the question was not asked (as a result of interviewer error) or the respondent did not want to answer the question. Such variables are designated as missing values in the data file.

In the specific case of this study the focus on maternal health care meant that the domain of the study was limited to the women section of the GDHS questionnaire (see, chapter Four) and, specifically, to those individuals in the 2003 and 2008 surveys who had used the maternal health care services. The first encounter with missing variables was, thus, with those variables that were missing per the definition of the sub-group/sub-population. These missing variables are dealt with by dropping all variables that were not in the study's domain (Acock 2005; Juster & Smith 2004) before any analysis or description of the data, including the ongoing analysis of missing variables, was conducted. This, in turn, ensured that the study was able to differentiate between variables that were missing per the definition of the sub group – not problematic for the analysis – as compared to those variables in the defined study sub groups but which had missing values.

For the purposes of the thesis, of the full sample of the GDHS 2003 – 6628 households of which 6333 were occupied, 6251 were successfully interviewed, thus implying a response rate of 98.7%. The domain, as defined by the purposes of this study, implied that the actual sample of interest was limited to the women who had utilised maternal health services – a total of 5949 eligible women of whom 5691

(Ghana Statistical Service 2004) were interviewed successfully. However, not all these women had availed themselves of the maternal health care health services – See Table 6.1 for details.

In the 2008 GDHS sample of 12,323, 11,913 households were occupied, of which 11,778 were successfully interviewed, thus giving an overall response rate of 98.9% (Ghana Statistical Service 2009). Also as regards the 2008 GDHS sample of 5,096 eligible women, 4,916 were successfully interviewed, thus giving a female response rate of 96.5%.

6.3.4 Summary of Variables

Table 6.4: Summary statistics of variables

GDHS 2003					GDHS 2008			
Statistic	Obs.	Mean	Std. Dev.	Min/ Max	Obs.	Mean	Std. Dev.	Min/ Max
Age (Years)	2663	30.45	7.40	15/49	2088	30.21	7.26	15 / 49
Antenatal care utilisation	2663	5.24	3.33	0/30	2088	5.79	3.30	0/32
BMI	2663	2640.63	1704.88	1391/5943	2088	2446.16	1011.35	1218 / 4814
Total Number of Children	2663	3.70	2.39	1 /13	2088	3.48	2.26	1/14

Source: Author's own computations based on GHDS 2003 and 2008

Table 6.4 and 6.5 presents a summary of the characteristics of women interviewed in the 2003 and 2008 GDHS who had utilised maternal health services. Women who participated in this section of the survey for both years examined were aged from 15 to 49 years old with an average age of approximately 30.45 years for 2003 and 30.21 years in 2008. On the use of antenatal care services, majority of women had had

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some prenatal care during their pregnancies with the average number of antenatal visits of for 2003 slight lower than that for 2008; 5.24 and 5.79 respectively. The mean number of children for a woman dropped from approximately 4 children per women in 2003 to 3 children in 2008.

Of the sampled women for both years the majority lived in rural communities 71.01 % of women sampled in 2003 and 64.42% of 2008. In 2003 60.42% of women sampled had no schooling this figure had dropped in 2008 to 53.64%.   In both survey years the predominant religion was Christianity, followed by Islam. 7.29% of women in 2003 compared with 4.75 in 2008 reported not religion. For details see tables 6.4 and 6.5.

Table 6.5: Summary of Categorical Variables

	GDHS 2003		GDHS 2008	
Locality	Frequency	Percent	Frequency	Percent
Rural	1,891	71.01	1,345	64.42
Urban	772	28.99	743	35.58
Total	2,663	100	2,088	100
Attended School	Frequency	Percent	Frequency	Percent
No Schooling	1,609	60.42	1,120	53.64
Some Schooling	1,054	39.58	968	46.36
Total	2,663	100	2,088	100
Religion	Frequency	Percent	Frequency	Percent
Christian	1,806	67.84	1,429	68.50
Moslem	521	19.57	405	19.42
Traditional	140	5.26	150	7.19
No religion	194	7.29	99	4.75

| Other | 1 | 0.04 | 3 | 0.14 |
| Total | 2,662 | 100 | 2,086 | 100 |

Source: Author's own computations based on GHDS 2003 and 2008

6.4   Descriptive Analysis[45]

This section presents the summary descriptive analysis of the inequalities in the use selected maternal health variables across Ghana for the two surveys. The analysis used contingency tables and charts. At bottom, the analysis involves an analysis of the variables pertaining to the source of antenatal care and the location of the antenatal care delivery by wealth level, location and region. The aim of the analysis was to provide a more general representation of the levels of inequality in the country with regards to maternal health use. The wealth variable used is derived from creating quintiles from the wealth index variable outlined in the selection of variables earlier in the chapter. Significant tests are conducted for each categories and probabilities for significant changes in the variables are reported.

6.4.1   Antenatal Care Use[46]

In analysing the antenatal care use, the variable of interest was the source of the antenatal care. The reason for this was primarily as a result of the fact that the inequities in the utilisation rates were examined in more detail using concentration curves and the inequality index analysis. Fewer rural women received antenatal care in 2008 from a doctor or a nurse than in 2003, though the difference was not statistically significant $[Pr(|T|>|t|=0.63)]$. A further examination of the data revealed that fewer rural women in 2008 also had not received any antenatal care than in 2003. The decrease in rural women not receiving care was statistically significant at 99% $[Pr(|T|>|t|=0.00)]$***. This, in turn, means that, although these women had not received their care from a doctor they had received some form of antenatal care

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[45] All though this section significant level are reported as; *p≤0.1 **p≤0.05, *** p≤0.01
[46] The tables related to this discussion are presented in Appendix E

either from a nurse or an auxiliary nurse. Overall there was an improvement in the use of doctors for antenatal care, mainly driven by the improvement in the use of doctors for antenatal care in urban areas which was significant with a probability of $[Pr(|T|>|t|=0.00)]$***. There was also an improvement in the use of other health personnel while the percentage of pregnant women who did not use any antenatal care dropped from 2003 to 2008, details presented in table 6.6.

Table 6.6: Source of antenatal care from a doctor (column percentages in parenthesis)

Location /Year	2003				2008			
Category	Doctor	Nurse/ Midwife	Other	No one	Doctor	Nurse/ Midwife	Other	No one
Rural	112 (53)	1603 (69.6)	12 (92)	200 (94.79)	72 (42.60)	1095 (63.29)	4 (80)	72 (87.80)
Urban	99 (46.92)	700 (30.40)	13 (92.86)	200 (94.79)	97 (57.40)	635 (36.71)	1 (20)	10 (12.20)
Total	211 (100)	2303 (100)	14 (100)	211 (100)	169 (100)	1730 (100)	5 (100)	82 (100)

Source: Author's own computations based on GHDS 2003 and 2008

The regional level[47], however, presented extremely mixed results with a number of regions seeing declines in the use of doctors and nurse services for antenatal care. The number of people who did receive antennal health care from any qualified health person increased in two regions, namely, the Western region and the Brong Ahafo region. In the three Northern regions, well documented for their high levels of poverty and social deprivation, there were relatively large declines in the use of doctors health personnel for antenatal care over the period. Of the women who did receive antenatal care, the Ashanti and the Greater Accra region respectively recorded the highest levels of antenatal care from doctors – 28.91% and 26.54% respectively – while the three northern regions – the Northern, upper West and Upper East regions – recorded the lowest levels of antenatal care from doctors of 3.79%, 3.79% and 1.42% respectively.

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[47]The tables for the regions available in Appendix E

Table 6.7: Wealth quintile and antenatal care from doctors (column percentages in parenthesis)

Location /Year	2003				2008			
Category	Doctor	Nurse/Midwife	Other	No one	Doctor	Nurse/Midwife	Other	No one
Poorest	28 (13.27)	710 (30.83)	6 (42.86)	132 (62.56)	24 (14.20)	468 (27.05)	2 (40)	39 (47.56)
Poor	32 (15.17)	501 (21.75)	6 (42.86)	45 (21.33)	29 (17.16)	377 (21.79)	2 (40)	26 (31.71)
Middle	41 (19.43)	432 (18.76)	1 (7.14)	25 (11.85)	30 (17.75)	320 (18.50)	1 (20)	11 (13.41)
Rich	32 (15.17)	366 (15.89)	1 (7.14)	7 (3.32)	36 (21.30)	344 (19.88)	0 (0)	5 (6.10)
Richest	78 (36.97)	294 (12.77)	0 (0)	2 (0.95)	50 (29.59)	221 (12.77)	0 (0)	1 (1.22)
Total	211 (100)	2303 (100)	14 (100)	211 (100)	169 (100)	1730 (100)	5 (100)	82 (100)

Source: Author's own computations based on GHDS 2003 and 2008

When analysed together with the wealth level the trend generally showed that, in both 2003 and 2008, the more wealthy individuals had used more specialised antenatal care (Doctors and nurses) though the change registered was not statistically significant for all five wealth quintile groups. A closer examination of the data revealed that all the income groups, with the exception of the poorest income group, had shown an increase in the uptake of doctors' services for antenatal care. For mothers who reported as receiving antenatal care for others the poorest quintile recorded a statically significant decrease from 2003 to 2008 $[Pr(|T|>|t|=0.00)]$***. In terms of those who had not used any specialised personnel for antenatal care, although the poor constituted the largest group, there was a decline in all the income groups not using any specialised antenatal care. The poorest quintile recorded a

significant decline from 2003 to 2008 in not using any antenatal care [Pr(|T|>|t|=0.00)]***. The details are presented in Tables 6.6 and 6.7.

There is no doubt that there is need for some extra care during pregnancy, though questions remains regarding what should constitute antenatal care and at which level this care should be provided. Also the benefits on antenatal care directly to pregnant women remains a debate and studies have suggested that routine procedures conducted during antenatal care have minimal benefits to outcomes but rather the gains are mainly from screening of maternal history (Say & Raine 2007; Bloom et al. 1999; McDonagh 1996; Carroli et al. 2001). Additionally it has been established that women who attend antenatal care are more likely to use skilled assistance at delivery compared to women who received low levels of antenatal care (Bloom et al. 1999). There is however little standardisation globally in what antenatal care should entail and further to this in developing countries there wide variation in content and quality of antenatal care received due to factors related to facility where care was gotten (Bloom et al. 1999). Poor quality of antenatal care received has been noted as an impediment to preventing diagnosing and treating complications in pregnancy (McDonagh 1996; Rani et al. 2008). It has been noted that to maximise the benefits from antenatal care attention needs to be paid to the quality and coverage of care (Mrisho et al. 2009).

In terms of providers literature is not emphatic with regards to differentiating between antenatal care by doctors or nurses. Evidence suggests that especially in developing countries antenatal care is general given by any trained provider or health officer and it is less likely to be given by a doctor. In many developing countries antenatal care is given by a nurse or midwife however, Pallikadavath et al. (2004) reported that in rural northern India antenatal care was predominantly given by doctors. Some studies have suggested a variation in quality of care depending on whether the provider is a doctor, nurse/midwife (Afulani 2015; Rani et al. 2008; Nigenda et al. 2003). The availability of doctors suggests that coverage would be greatly constrained if the provision of antenatal care limited to doctors only and

issues with quality of care are more related to the availability of services and facilities.

6.4.2   Maternal Delivery Services

The overall trends depicted in Tables 6.8 and 6.9 show an overall increase in the use of formal facilities for delivery purposes from 2003 to 2008. However, urban areas recorded a decrease in the use of heath facilities from 2003 to 2008. Delivering at home also noted a statistically significant decline from 2003 to 2008 for both rural and urban areas [Pr(|T|>|t|=0.00)]***.   Both rural and urban areas recorded statistically significant increases in the sue of health facilities for delivery both reporting probabilities of [Pr(|T|>|t|=0.00)]***. It is also significant to note that there was a significant reduction in the number home births in the rural areas between 2003 and 2008. Details are presented in table 6.8.

Table 6.8: Distribution of Place of Delivery by Location (column percentages in parenthesis)

Location/Place of Delivery	2003			2008		
	Home	Health Facility	Other	Home	Health Facility	Other
Rural	1,385 (89.07)	560 (46.59)	6 (66.67)	798 (86.83)	575 (47.33)	10 (83.33)
Urban	170 (10.93)	642 (53.41)	3 (33.33)	121 (13.17)	640 (52.67)	2 (16.67)
Total	1,555 (100)	1,202 (100)	9 (100)	919 (100)	1,215 (100)	12 (100)

Source: Author's own computations based on GHDS 2003 and 2008

Once again the trend as regards wealth, when analysed, reveals that the more wealthy make greater use of Health facilities for delivery in Ghana as compared to the other income groups. However, from 2003 to 2008, two wealth quintiles; the poor and the middle recorded statistically significant decline in delivering at home with a probability of [Pr(|T|>|t|=0.00)]***.   For the same period all wealth quintiles examined, with the exception of the richest noted statistically significant increases in the use of health facilities for delivery purposes [Pr(|T|>|t|=0.00)]***.   In the use of

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other health facilities for delivery purposes all wealth quintiles recorded statistically significant increases with probability of [Pr(|T|>|t|=0.00)]*** for the poorest, poor, middle and rich and a probability of [Pr(|T|>|t|=0.08)]* for the richest quintile. Details of percentage changes are reported in table 6.9.

Table 6.9: Place of delivery by wealth quintile (column percentages in parenthesis)

Wealth Quintile/Place of Delivery	2003			2008		
	Home	Health Facility	Other	Home	Health Facility	Other
Poorest	719 (46.24)	163 (13.56)	4 (44.44)	476 (51.80)	154 (12.67)	4 (33.33)
Poor	410 (26.37)	177 (14.73)	2 (22.22)	230 (25.03)	238 (19.59)	4 (33.33)
Middle	283 (18.20)	218 (18.14)	1 (11.11)	125 (13.60)	247 (20.33)	3 (25.00)
Rich	107 (6.88)	306 (25.46)	2 (22.22)	69 (7.51)	321 (26.42)	0 (0.00)
Richest	36 (2.32)	338 (28.12)	0 (0.00)	19 (2.07)	255 (20.99)	1 (8.33)
Total	1,555 (100)	1,202 (100)	9 (100)	919 (100)	1,215 (100)	12 (100)

Source: Author's own computations based on GHDS 2003 and 2008

The general trend in all the services examined revealed the inverse care hypothesis (Hart 1971) in antenatal health utilisation in Ghana as utilisation of the antenatal health services by the poor and rural residents continued to be lower than that of their wealthier counterparts and those living in urban areas. According to the inverse care hypothesis, the people or populations who require good medical care are the ones who are the least likely to have this made available to them, thus implying that, for any given population, the accessibility and utilisation of proper healthcare and the need for proper healthcare are inversely related (Hart 1971).

6.5 Inequality Indices and Curves

6.5.1 Standardising the Antenatal Care Health Variable

It is typical and justifiable for health utilisation variables to exhibit inequality in relation to some socioeconomic variable of choice.[48] These inequalities may obviously not be interpreted as inequities as they may be attributable to demographic conditions (see Chapter three). Thus, the only way in which to approximate a measure of health inequity is to standardise the inequality for differences in need and other confounding variables. The following two approaches are possible, namely, direct and indirect standardisation (see Chapter four for details). This section discusses the indirectly standardised prenatal health utilisation variable using the specification outlined and discussed in Chapter four. Principal component analysis (PCA)[49] was used to determine the variables that best predict antenatal care use in Ghana. This analysis was combined with conclusions from relevant literature and subject to data availability in the GDHS survey.[50]

The PCA technique is based on the principle that a specific unobserved variable, also known as the latent variable, is correlated with a set of directly measured variables (Jolliffe 2005; Yi 2002; Wood 2009). In this study the latter are a range of socioeconomic and health variables that influence the use of the antenatal health care services which were selected based on the literature review. This latent variable may be predicted by examining the correlations between these observed variables (Yi 2002). The PCA procedure provides a means of summarising the information provided by several variables by decomposing the variance in the data into factors or components. Each component is the sum of each of the observed variables multiplied by its weight, which is the proportion of the variance in the data accounted for by

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[48]This may be incomes, consumption, wealth or even education.
[49]Find results of this analysis in Appendix H
[50]The choice of GDHS was made after examining all the available household datasets on Ghana including; the Ghana Living Standards Survey and the MICS and determining which of these contained the most relevant variables available – see Chapter four.

each of the observed variables. One of the components is chosen to be the index which measures the observed variables based on a selected criterion such as the component that has the highest eigenvalue or produces the best explanation of the variance in the data.

The first component of a PCA result is usually the component that best explains the significant majority of the variation. The result of the PCA shows that the first component explained 30% and 29% for 2008 and 2003 surveys respectively of the variation with an Eigenvalue of 2.7 and 2.6 in the same order. The Kaiser-Meyer Olkin (KMO) test was applied to examine the robustness and sampling adequacy of the PCA performed on the data and which produced an overall correlation of 0.65 and 0.63 for the 2008 and 2003 samples respectively. According to the decision rule this means that the PCA may be performed on this data.[51]

6.5.2 Regression Model and Results

The negative binomial regression model is part of the class of non-linear regression models estimated by maximum likelihood (Hilbe 2011; Gardner et al. 1995). The model employs a natural log link function and it is a count data model. Count response models are a subset of discrete response regression models and include; binary logistic, probit regression, grouped logistic, grouped complementary loglog, ordinal logistic, ordered probit regression, discrete choice logistic regression, poisson and negative binomial regression (Hilbe 2011). These discrete models address non-negative integer responses. Of these model two that are used for count data, which consists of discrete responses of counts are the poisson and negative binomial regression. These models aim to explain the number of occurrences of an event by their nature these counts themselves are heteroskedastic, right skewed, and have a variance that increases with the mean of the distribution.

The negative bionomial model thus relaxes the equidispersion restriction of the Poisson model through the introduction of latent heterogeneity in the conditional

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[51]Decision rule KMO of greater than 0.5 means that the PCA may be performed

mean of the Poisson model (Greene 2008; Hilbe 2011). This makes it the model of choice for overdispersed count data.

The results of the negative binomial model were interpreted as the expected log count of the dependent variable. In the case of the model specified for antenatal care use a negative significant coefficient would imply that a one-unit increase in the respective independent variable would decrease the expected log count of antenatal care use by the value of the coefficient and vice versa. The results may also be interpreted as incidence ratios with the use of the respective command.

Health care use data typically comprises nonnegative integer counts which require the application of nonlinear estimators (Cameron & Trivedi 2013; Hilbe 2011; O'Donnell & Wagstaff 2008). The nature of health count data[52] is such that it often collapses the assumptions for the ordinary least square estimations, potentially rendering the parameters estimates inaccurate (O'Donnell & Wagstaff 2008; Hilbe 2011). In the case in which the predictors are skewed, for example, measures of service use or cost data, the best models are nonlinear count regression models. For the purposes of these models the dependent variable is a non-negative integer while the predictor variables may take any form (Elhai, Calhoun & Ford 2008). The section discusses the negative binomial regression model which was adopted as the dependent variable, while the use of antenatal health services was a count variable, which was also over dispersed. The mean was significantly different to the variance (Byers et al. 2003; Elhai et al. 2008).

Based on the variables identified the model estimated is specified below;

$$logP_i = \alpha + \beta X_i$$

Where Pi = is the health count variable of interest (antenatal care)

α = intercept parameter

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[52]Graphs and charts are provided in appendix to show over dispersion and the need for a negative binomial estimator

β = vector of slope parameters

Xi = vector of explanatory variables

Total number of children

BMI

Age of mother

Visited health facility,

Wealth index (Quintiles)

Employment status

Religion

Highest Education level attained

Religion affiliation

Location (rural or urban)

The regression results indicated that the following factors demonstrated a significant positive association with the use of antenatal care; total number of children, Body Mass Index (BMI) of the mother, age of the mother, whether or not the mother had been ill or injured, level of wealth of the household, religion of the mother and whether or not the mother had ever attended school. After setting the survey and applying survey weights, a negative binomial regression command[53] was run. The command used presented the output in the form of rates and was interpreted as the effect of a unit change in the independent variable on the rate of using antenatal care. The results for 2003 showed that an additional child decreased the rate of prenatal

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[53] svyset psu [pweight = sampwt], strata(v022)
global xvar "total_child BMI age Visited_health_facility"
global zvar "i.Wealth_quint worked_in12months i.religion Attended_sch Location "
nbreg prenatal $xvar $zvar [pw=weight], irr

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care by 0.95. An additional year for a woman increased her use of antenatal care by 1.02. Illness or injury (necessitating a visit to a health facility) increased the rate of antenatal care use by 1.11. Having an education increased the rate of antenatal care by 1.15. Finally on the 2003 regression relocation from a rural area to an urban area increased the rate of antenatal care use by 1.19.

Table 6.10: Negative Binomial regression results[54]

Variable/ Year	2008	2003
Total child	0.95*** (-4.67)	0.95*** (-5.45)
BMI	1.00* (2.37)	1.0 (0.59)
Age	1.02*** (5.51)	1.02*** (6.27)
Visited health facility	1.12*** (4.12)	1.11*** (4.44)
	1.07* (1.99)	1.07* (1.79)
	1.13** (2.80)	1.10* (2.33)
Wealth_quint	1.28*** (6.0)	1.23*** (4.56)
	1.399*** (6.76)	1.43** (7.30)
Employment	0.96 (-0.75)	1.07** (1.88)
	1.00* (0.09)	1.23** (3.13)
	0.83** (-2.84)	0.85 (-1.51)
Religion	0.84* (-2.52)	0.31*** (-17.53)
	1.26*** (5.32)	2.83*** (15.53)
Education	1.07* (1.98)	1.15*** (5.62)
Location	1.09** (2.64)	1.19*** (5.35)
constant	3.06*** (14.65)	2.08*** (7.65)
N	2084	2661
Wald Chi2	492.33	664.93

Source: Author's own computations based on GHDS 2003 and 2008

*p≤0.1 **p≤0.05, *** p≤0.01 t- values in parenthesis

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[54] Full regression tables presented in Appendix I

For the 2008 regression the total number of children a woman reduced the rate of antenatal care use by 0.95 while BMI, that had not emerged as significant in 2003, was significant in 2008, maintaining its positive association with antenatal care use. Surprisingly the employment status of the mother was not significantly related to the use of antenatal health services. This may, however, be attributable to the fact a significant proportion of individuals surveyed had been employed at some time. The regression results for 2003 and 2008 are reported in the table 6.10. The goodness of fit statistics reported that the negative binomial model was the appropriate model for the data as indicated by the dispersion parameter and the log likelihood statistic. Both the variance inflation factor and the tolerance levels showed that multicollinearity was not an issue of major concern in this model. This may be observed in the correlation between the variables presented in the appendix G. Graphs and other regression diagnostic test are also included in the appendix I.

Table 6.11: Mean of antenatal care use post standardisation

Year	2003		2008	
Quintiles	Observed	Need adjusted	Observed	Need adjusted
Poorest	4.04	3.94	4.56	4.62
Poor	4.50	4.47	5.16	5.13
Middle	5.13	4.96	5.77	5.62
Richer	6.34	6.07	6.88	6.54
Richest	8.20	7.60	8.11	7.47
Total	5.24	5.05	5.79	5.63

Source: Author's own computations based on GHDS 2003 and 2008

Table 6.11 presents the quintile means of the antenatal care utilisation variable both before and after it had been standardised. It may be observed that primarily the means of the standardised variables are less than the mean of the observed prenatal utilisation variable. This situation changed only with the 2008 level for the poorest group which reported a higher level of need-adjusted prenatal care than was observed. The overall mean of the need-adjusted variable for both 2003 and 2008 are

lower than was observed. This shows that pregnant women are actually using less antenatal services than observed when adjusted for their need.

6.5.3 Concentration Curve (Standardised Antenatal Care Variable)

As discussed in Chapter 4 the health concentration curve[55] for prenatal care is used to illustrate pictorially the presence of inequality in the use of prenatal health care. The concentration curves in figures 6.1 and 6.2 illustrate the trends in overall inequality in maternal health over the period. Although the concentration index discussed in the next section is computed, the aim of the curves is to provide a general overview of inequality in antenatal care across the country and, thus, the sub groups presented are both rural and urban in order to ensure a more nuanced analysis than would otherwise have been the case. Figure 6.1 and 6.2 presents the concentration curve for antenatal care utilisation for the two years.
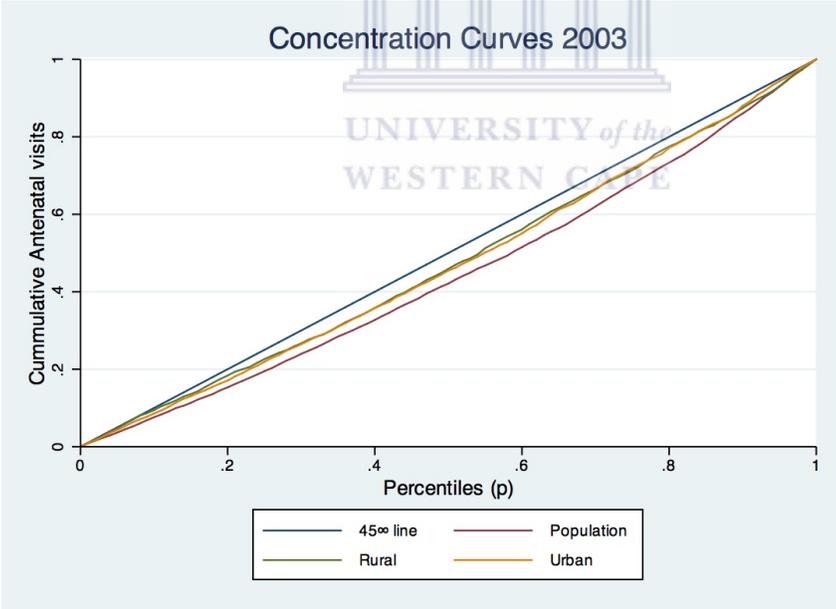
Figure 6.1: Concentration index for antenatal care utilisation – 2003(Author's Construct, 2014)

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[55]See specification and details in methodology chapter
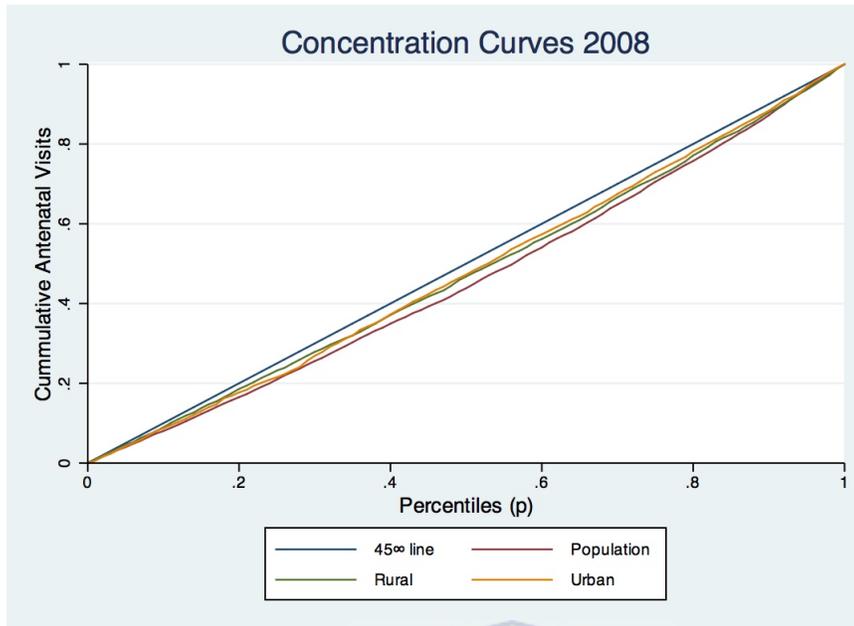
Figure 6.2: Concentration index for antenatal care utilisation – 2008 (Author's Construct, 2014)

The figures 6.1 and 6.2 show a situation in which the overall inequality in antenatal health utilisation declined between 2003 and 2008 in both rural and urban areas. Depicted as the gap between the curve and the line of equality it is clear that the inequality was relatively wider in 2003. This was worse in the urban areas as compared to the rural areas. However, in 2008 there had clearly been a significant improvement in the overall inequality which was seemingly triggered by a marked improvement in the urban inequality situation. Nevertheless, the situation in the rural areas had also improved and both curves virtually coincide with the line of equality. This will, however, be analysed in detail when the concentration indices are computed using the standardised utilisation variable. Both curves continued to lie below the line of inequality, thus indicating that the equivalent index values would be positive and the inequality depicted as pro-rich. The next section discusses the equivalent concentration index values for these curves and also presents a regional breakdown of the indices.

6.5.4 Concentration Index: Measurement and Decomposition

In 2003 the overall inequity in antenatal care utilisation as measured by the concentration index was 0.15. As illustrated by the concentration curve depicted above this value indicates the existence of positive pro-rich inequity in prenatal care use. Of this figure of 0.15, 0.09 constituted interregional inequities in health, thus explaining the differences between the various regions (see specification of index in Chapter four) while the figure also showed a pro-rich distribution in antenatal care use between the various regions. The inequities within regions accounted for a total of 0.82 (see Table 6.12 for details). The fact that the level of within region inequities was much higher than the level of inequities between regions indicated a need to examine the inequities in the regions.

Table 6.12: Concentration index decomposition result

CI	2003	2008
Between Regions	0.0898 (0.0006)	0.0645 (0.0006)
Within Region	0.8182	0.6135
Residual	-0.7594	-0.5716
Total	0.1486 (0.0083)	0.1064 (0.0072)

Source: Author's own computations based on GHDS 2003 and 2008

Table 6.13 presents the regional level of the concentration indices. The performance is generally mixed with some regions showing much higher levels than others. The Western Region recorded the highest level with an index value of 0.13, followed by the Greater Accra region, which reported an index of 0.11. All the regions surveyed in 2003 recorded pro-rich inequalities in antenatal care use.

In 2008 the overall concentration index value was 0.11 with this value indicating that the inequities exhibited were pro-rich. The between region component was 0.06, which was lower than the overall index and much closer to zero, thus showing that the level of inequities between the regions was markedly better than the overall inequities. However, the between regions inequities maintained its pro-rich character with a positive sign, thus indicating that the better off regions were faring much better than the poorer regions in the area of antenatal care use.

The examination of the within region component of the concentration index revealed the reason why the national level was much higher than the value for the between region. With an index value of 0.61 the inequities within the various regions was both extremely high and pro-rich, thus indicating that distributions within the regions may require more attention than they were being accorded. The regional levels of inequities showed that, in 2008, of the 10 regions, only the Upper East was exhibiting pro-poor inequities in antenatal care with a negative sign while the remaining 9 were all showing pro-rich inequities. This region also had the lowest level of inequities as measured by the magnitude of the index. The Western region had the highest level of inequities in antenatal care use and this was also pro rich (a level of 0.12), followed by the Ashanti region with a value of 0.09.

Table 6.13: Regional concentration indices

Region	2003	2008
Western	0.1282 (0.0214)	0.1223 (0.0232)
Central	0.0761 (0.0210)	0.0555 (0.0264)
Greater Accra	0.1123 (0.0176)	0.0425 (0.0160)
Volta	0.1043 (0.0349)	0.0524 (0.0173)
Eastern	0.0753 (0.0236)	0.0602 (0.0204)
Ashanti	0.0926 (0.0129)	0.0864 (0.0166)
Brong Ahafo	0.0572 (0.0138)	0.0782 (0.0212)
Northern	0.0761 (0.0214)	0.0622 (0.0181)
Upper West	0.0387 (0.0243)	0.0581 (0.0172)
Upper East	0.05741 (0.0239)	-0.0044 (0.0181)

Source: Author's own computations based on GHDS 2003 and 2008

From 2003 to 2008 the inequities in antenatal care use reduced at the national level from 0.15 to 0.11 although they maintained their pro-rich character. This reduction

in the level of pro-rich inequalities was a sign of an improvement in the situation of the poor with regards to antenatal care use. It would appear that this decrease was triggered by a decline in both the between regional component and the within regional component, the former declining from 0.09 to 0.06 and the latter from 0.82 to 0.61. However, both the within region inequities and the between region inequities continued to exhibit a pro-rich character. A detailed exploration of both the magnitudes and the signs of the regional index values for all 10 regions revealed a mixed performance over the period. Two of the 10 regions in the country, Brong Ahafo and the Upper West regions, had experienced an increase in inequity levels with their index values increasing from the 2003 level to the 2008 level (see Table 6.13 for details). On the other hand, only one out of the 10 regions in Ghana, the Upper East, had experienced a change in the sign of the index, thus indicating a movement from exhibiting pro-rich inequities to exhibiting pro-poor inequities. In addition, this region also reported the lowest level of inequities as indicated by the magnitude of the absolute value of the index.

6.5.5 Theil's Index: Measurement and Decomposition

The decision to combine the concentration index (discussed above) and the Theil index was as a result of the complete decomposable nature of the Theil's index (see Chapter four for details) while the concentration index provides additional information on the gradient of inequality. However, an analysis of this index revealed that although the actual level of the index varied both indices indicated that inequities in antenatal care utilisation were best explained by differences within the regions as the Theil's index recorded a higher level of within region inequities for both 2003 and 2008. The Theil's index also confirmed the results based on the concentration index, namely, that both the between region inequities and within region inequities declined from 2003 to 2008.

Table 6.14: Theil index decomposition result

Theil (1)	2003	2008
Between Regions	0.0105	0.0071
Within Region	0.1627	0.1299
Total	0.1732	0.1371

Source: Author's own computations based on GHDS 2003 and 2008

At the regional level all but two regions (Central and Brong Ahafo) recorded decreases in the Theil's index values from 2003 to 2008. It is worth mentioning that the concentration index analysis also indicated that the Brong Ahafo region had recorded an increase in antenatal care inequities although the Central region, which had recorded a decrease in the level using the concentration index, recorded a significantly higher level using the Theil. These specific variations may be attributable to the fact that the concentration index formula computes based on ranks of a wealth measure while the Theil's index uses only the standardised health variable. The details of the Theil index are reported in tables 6.14 and 6.15.

Table 6.15: Regional level Theil

Region	2003	2008
Western	0.1776	0.1619
Central	0.1528	0.1651
Greater Accra	0.1563	0.0906
Volta	0.1759	0.1405
Eastern	0.1885	0.1242
Ashanti	0.1359	0.1326
Brong Ahafo	0.1062	0.1278
Northern	0.2276	0.1254
Upper West	0.1624	0.1107
Upper East	0.1924	0.1321

Source: Author's own computations based on GHDS 2003 and 2008

6.6   Limitations of the Analysis

The results of the analysis were based on an increasing intensity of decentralisation. However, this, in turn, implies that a before and after comparison does not fully reflect the true nature of the relationship between decentralisation and health inequity in Ghana. Nevertheless, the design of the decentralisation process in Ghana and its roll out meant that this model represented the only feasible way of analysing the

decentralising reforms. In order to overcome this limitation the study combined methods and techniques to identify other country specific factors that had influenced health inequity within Ghana's decentralised system. This was achieved by means of a qualitative analysis.

The nature of decentralisation in Ghana and within the health system implied that, in order to conduct an analysis of this nature, data was required from a variety of sources. However, this was a problem as the majority of the household surveys (GLSS, MICS, GDHS) in Ghana do not contain adequate data at the district level. Nevertheless, the potential adverse effect of the latter on the research findings and results was countered by using data from a number of sources with household data from the GDHS providing a way of conducting a micro level analysis of health inequities and the administrative data from the Ghana Districts Assembly's Common Fund enabling the researcher to conduct a district level analysis of inequities in the health resources in the country.

The measurement of horizontal equity, as carried out in this study, is essential to the process of need assessment. One ways of assessing health needs is the use of a self-rated health variable. Self-rated health variables have been found to be associated with health care use in a number of studies(Abdulrahim & El Asmar 2012; DE LA HOZ & Leon 1996; Arnadottir et al. 2011; Miilunpalo et al. 1997). This variable is often available in surveys of this nature. However, the GDHS as well as the majority of other household surveys in Ghana do not include the self-rated health variable. Similarly a variable of the membership of the national health insurance scheme was required as a confounding variable was also not available in the two rounds of the survey. This meant the study was not able to adequately control for the effect of the introduction of the health insurance (Discussions in chapter 5) on maternal care utilisation. Accordingly, this study conducted a principal component analysis technique to determine the variables that best predict antenatal health care use.

6.7   Chapter Summary

This chapter contained two strands of quantitative analysis which examine the levels of inequities in health in Ghana. The section 1 of the chapter revealed the existence of significant levels of inequities between districts in all the health resources examined, specifically; nurses, doctors and health facilities. It emerged that the inequities in all these resources were pro-rich, thus implying that the richer districts in Ghana were characterised by higher levels of these resources as compared to the poorer districts. Of the three resources examined, health facilities recorded the lowest level of inequities. This may be explained by the fact that the data used did not distinguish between facility type and, thus, a closer examination based on facility type and status may reveal a different outcome.

The chapter then discussed the descriptive analysis of the selected maternal health variables. This analysis revealed a general increase in the use of maternal health care from 2003 to 2008. The analysis also revealed an obvious pro-rich gradient in the use of maternal health services in Ghana as, for all service categories explored, the level of use by the rich was higher than that of the poor. The revelation of pro rich gradient in selected health utilisation variables reinforces revelation that inequities at the district level favour richer districts. In terms of localities, it emerged that women living in the rural areas demonstrated a lower level of utilisation of maternal health services as compared to women living in urban areas, especially in the case of more specialised services such as doctors and hospital delivery services. The regional level analysis revealed an extremely mixed pattern However, the three northern regions (Northern, Upper East and Upper West) consistently demonstrated a lower utilisation levels of all the services explored as compared to the other regions.

The inequality curves analysis of the use of antenatal health care services indicated pro-rich inequities in the use of these services as depicted by the concentration curve lying wholly below the line of equality. The situation was shown to have improved in 2008 as compared to 2003. This finding was corroborated by the concentration

index analysis which provided the actual level of inequities as measured by the concentration indexes for 2003 and 2008. The concentration index analysis revealed that the general level of inequities in antenatal care use had dropped from the 2003 level of 0.15 to the 2008 level of 0.11. This drop was noted in both the between group inequities and the within group inequities. The analysis also showed that, for both time periods, the within group inequities were significantly higher than the within group component. The Theil's index confirmed these results as it showed an overall decline in inequities from 0.17 in 2003 to 0.14 in 2008. Once again, as with the concentration index, the Theil's index demonstrated a drop in both the within group and the between group components. The Theil's index also further confirmed the fact that inequities in antenatal care utilisation are driven primarily by within group inequities with within group levels of 0.16 and 0.13 for 2003 and 2008 respectively and the corresponding between group components of 0.01 and 0.01 respectively.

Overall the quantitative analysis in this chapter reveals that whether at the household level or at the district level inequities in maternal health service in Ghana generally favour the rich.

The chapter also highlighted a number of limitations of the study, namely, data limitations and design limitation. These limitations are addressed in the next chapter. The next chapter also discusses the qualitative analysis which provided a more detailed and nuanced examination of the question of the way in which decentralisation has impacted on inequities in Ghana from the perspectives of policy makers within both the health system and the decentralised structures.

Chapter 7

A Qualitative Analysis of Inequity in Ghana's Decentralised Health System

7.1   Introduction

The previous chapter contained a quantitatively investigation into the existence of health inequities in Ghana's decentralised system. This was achieved at two levels by using district level data in order to examine inequities in the health resources and, at the individual level, by examining the existence of inequities in the antenatal care utilisation variables.

Based on the data collected from the interviews and in line with the arguments presented in respect of the theoretical basis for the study, this chapter discusses the qualitative analysis of health inequities in Ghana which was conducted. The perspectives of the relevant policy makers are analysed, thus helping to provide insights into the patterns of health inequities revealed in chapter 6. The main objective of this chapter is to provide a nuanced understanding of the impact of decentralisation on health inequities and to determine from the perspective of the policy makers whether and how decentralisation is achieving its objectives in the area of inequities in the health sector in Ghana.

The chapter also identifies and examines both the channels through which decentralisation has reduced inequities in the health system and the major factors that continue to threaten equity in health in Ghana.

The analysis in this chapter focuses on the data gathered from four districts in Ghana; two in the northern half of the country and the other two in the southern half of the country. These four districts[56] include two metropolitan assemblies (Accra and Tamale), a municipal assembly and a district assembly (Ga-South and Kumbungu).

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[56] The map presented in chapter four outlines the study area.

The details on the motivation for selecting these districts and a summary profile of each district are provided in next section of this chapter. In each of these districts interviews were conducted with officers from the Ghana Health Service and the District Assembly.

The chapter also includes interviews with officers from the relevant national level institutions working with the decentralised structures in the country such as the District Assemblies Common Fund (DACF), District Development Facility (DDF), Ministry of Local Government and Rural Development (MLGRD), Ministry of Health (MoH) and Ministry of Finance and Economic Planning (MoFEP). The details of the sampling methods and interview techniques were outlined in Chapter 4.

The analysis is guided by the theoretical, conceptual arguments and empirical discussions presented in Chapters 2 and 3 and on which the responses from the interviews are generated and discussion are grouped/outlined.

7.2   A Preamble to the Selected Districts

7.2.1   Accra Metropolitan Assembly (AMA)

Of the four districts in which the interviews were conducted the Accra Metropolitan Assembly is, by all standards, the most developed and is also viewed by many as the most privileged district in the country. The Accra Metropolitan Assembly comprises a district of 117 sq. metres in landmass with a population of approximately 1,232,409.00 (GoG 2013), thus making it the most densely populated district in the country. The district is located in the south-eastern corner of Ghana and is bordered by four districts, namely, Ga West, Ga East, Ga South and Asiahman and also the Gulf of Guinea to the south. The district is also home to the national capital city, Accra, making it the most cosmopolitan of all the districts in the country. The AMA is an urban district comprising a total of approximately 101 communities, a number of which are urban slum areas. In terms of infrastructure, the AMA is the most developed in the nation and most of the district is accessible by tarred, trunk roads (Accra Metropolitan Assembly 2010). The vegetation of the district is coastal

savannah. In keeping with its cosmopolitan character a varied range of economic activities are carried out in the district with the inhabitants of the district being employed in all the major sectors of the economy. These are primarily formal sectors with trading being the most significant(Accra Metropolitan Assembly 2013).

7.2.2   Ga South Municipal Assembly (GSMA*)*

The Ga South Municipal Assembly (GSMA) is located in the Greater Accra Region. The municipality shares boundaries with five other districts, namely; Accra Metropolitan, Akwapim, Ga West, West Akim, Awutu-Effutu Senya and Gomoa and is bordered in the south by the Gulf of Guinea. The Ga South Municipal Assembly occupies a land area of approximately 81 sq metres and includes an estimated population of 242,822 people. In view of the proximity of the municipality to the national capital, Accra, there is considerable pressure on land for both residential settlement and industrial land use(Ga South Municipal Assembly 2010). The vegetation of the assembly comprises predominantly coastal savannah with secondary forests in some parts of the area. The municipality is generally considered to be a peri-urban community. The population density of 550.5 persons per sq. meter is higher in those areas of the municipality that border Accra but becomes less dense the further away from the capital(Ga South Municipal Assembly 2010). The main economic activity in the district is trading and a huge proportion of the inhabitants commute daily to Accra, the national capital, to work(Ga South Municipal Assembly 2010).

7.2.3   Tamale Metropolitan Assembly (TaMA)

The Tamale Metropolitan Assembly is the largest district in the northern part of the country. The major city in this district, Tamale, is also the district capital and serves as the economic hub of the northern part of the country. The only domestic airport in the northern part of the country is in Tamale and, the city serves as a major transit point for travellers to and from Burkina Faso, Ghana's landlocked neighbour to the north. However, despite the fact that the TaMA is also classified as a metropolitan assembly, it is very different from the AMA. The geographic spread of the district is

extremely wide with a landmass of 360 sq. metres. The population of 247,567 means that the district is not as densely populated as either AMA or many of the southern metropolitan assemblies. TaMA is predominantly an urban assembly although many of the communities within the district are classified as rural areas. In terms of accessibility the district is serviced by a number of trunk roads, the vegetation of the district is savannah and the inhabitants are mainly farmers and traders (Assembly 2010). The district shares boundaries with five other districts in the north, namely, Savelugu-Nanton to the north, the Yendi Municipal Assembly to the east, Tolon to the west, Central Gonja to the south west and East Gonja to the south. The main economic activities in the district are farming and trading (Assembly 2010).

7.2.4 Kumbungu District Assembly (KMA)

The Kumbungu district is a relatively new district which was carved out of the Tolon/Kumbungu district that was part of the original 45 districts created in 1988. The district shares its boundaries with Savelugu-Nanton Municipal to the east, the Tolon District to the south, the North Gonja District to the west and, to the north, the Mamprugo/Moaduri District. The district covers a landmass of 1205 square kilometres and includes an estimated 118 communities and a population of approximately 56,165 people. The main reason for the creation of this new district was the extensive size of the previous Tolon/Kumbungu district as this had made it difficult to provide services and hampered its management by a single assembly. The district's vegetation is mainly savannah. It is considered a rural district with a population density of approximately 50 people per sq. km.

The presence of a number of rivers that form the tributaries of the White Volta in the district means that fishing is a major economic activity in the district. The other main economic activities carried on in the district are peasant and subsistence farming. High levels of unemployment have driven many of the youth in the district, in common with the youth from other parts of northern Ghana, to migrate to the southern parts of the country to find informal sector jobs such as porters in markets, popularly known as "kayayee"(Kumbungu District Assembly 2010). Both the

physical and the social infrastructure in the district is poor and the district is served by two main trunk roads only (Kumbungu District Assembly 2010). The other roads in the district are feeder roads which are extremely difficult to navigate. A unique feature of this district is that a huge portion of the district across the White Volta is cut off from the rest of the district and cannot be accessed during the raining season. In local parlance this area is known as "overseas"(Kumbungu District Assembly 2010).

7.3   Decentralised Structures within the Districts

In terms of Ghana's decentralisation system there is little or no variation in the decentralised structures within the districts. What differentiates districts is the quality and the number of staff employed. The more rural districts face challenges as regards retaining staff members who have been posted or allocated to these districts and they often have to make do with staff members who have with significantly lower levels of qualifications as compared to staff in the urban and much larger districts. The chart below illustrates the structure of decentralisation as it exists in the districts in Ghana.
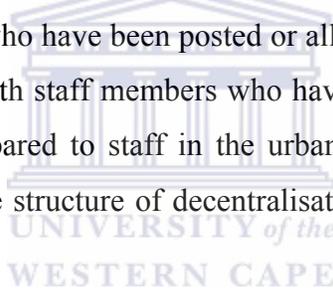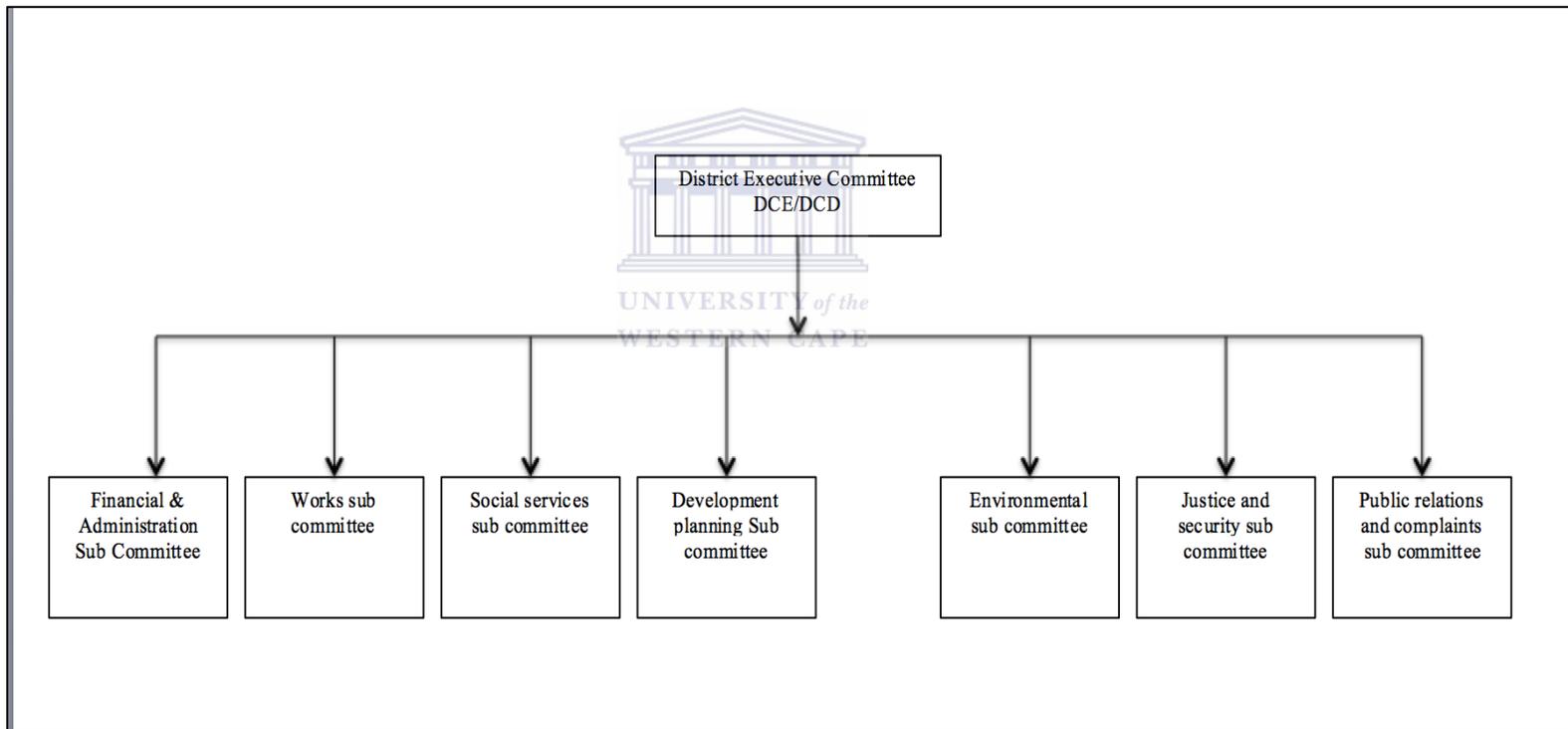
Figure 7.1.0: Administrative structure of a decentralised district[57]

7.3.1 Funding Sources for Districts

As was discussed in detail in Chapter 5 there are a number of revenue fund[...] sources available to all districts. However, in the main, all the districts tend to rel[...] the following three major sources, namely, internally generated revenues (IGRs)[...] District Assemblies Common Fund (DACF) and the District Development Fu[...] (DDF). Some districts also maintain direct relationships with donors although [...] donor funds have significantly reduced with the inception of the DDF to whi[...] number of donors allocate funds for the support of districts. However, there are a[...] donors still supporting districts directly in the form of specific projects. A numbe[...] urban districts are also part of an urban district funding mechanism which is finan[...] by donors[58]. Table 7.1 below illustrates the IGRs and the DACF allocations to [...] districts for the 2010 and 2011 financial years.

Table 7.1: District internally generated revenues[59]

District	Accra Metro	Ga South	Tamale Metro	Kumb[...]
Rev 2010 (USD[...]	5,991,781.00	465,949.60	330,113.79	18,511[...]
Per Capita Revenue 2010	4.86	1.92	1.33	0.33
Rev 2011 (USD)	15,895,279.23	2,857,873.74	352,428.59	40,904[...]
Per Capita Revenue 2011	12.90	11.77	1.42	0.73
Population 2010	1,232,409.00	242,822.00	247,567.00	56,165[...]
Area	117	81	360	1205

Source: Author's own computation based on data from the DACF Formula 2013 Report

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[58]See chapter six

[59] Revenues are based on exchange rate for April 2013, when data was published of 1.94 Ghana Cedis to the USD (http://www.bog.gov.gh/index.php?option=com_wrapper&view=wrapper&Itemid=298). Did not use purchasing power pa[...] conversion because the study did not conduct any international or cross country comparisons.

[59]Computed at 95% confidence interval.

Source: District Assemblies Common Fund Formula 2013 (Government of Ghana 2013a)

Of these sources of funding the most reliable, according to the districts in which interviews were conducted, tend to be the DDF, IGR and the DACF, although most of the districts complain about the delayed disbursement of the DACF[60]. While the DACF continues to remain the most significant revenue source for the districts, the representatives from the districts interviewed alluded to the fact that its value in terms of development impact was gradually being eroded (see Chapter 5). In terms of the internally generated revenues, these have tended to show the widest gaps between the various districts. Table 7.1 above depicts both the total and the per capita IGRs for the four districts in which interviews were conducted. The table reveals that the urban districts recorded the highest level of IGRs with the Accra Metropolitan Assembly showing the highest amounts. A participant from the Ministry of Finance explained this situation as followings;

> *If you go to some of the assemblies their "revenue health status" is not the same. If you take those at the northern side they do not get much revenue and, because of that, they are not able to support all the departments, including health, but, if you come down south, you could see that, if you take Greater Accra, Kumasi and Takoradi, those MMA, metro and municipal assemblies, they get a lot of revenue and, so if you see the disparities in the performance indicators per the Accra Metropolitan Assembly (AMA) or the Kumasi Metropolitan Assembly (KMA) compared to rural districts, this is where the problem is coming from.*
>
> *National Officer 01*

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[60]Chapter six

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The statement highlights the well-documented gap between the north and the south of the country (see Chapter 4 on contextual analysis). It emerged from the interviews conducted in the districts interviewed that the DDF was the most useful grant in terms of meeting developmental needs although many complained about the restrictions placed on the use of the DDF by its fund administrators[61]. In further explaining the usefulness of the DDF to the assemblies, a participant asserted that;

> *So far when it comes to DDF and the recent urban development fund there have been improvement, so, if a district does not have the DDF or any other fund, they cannot implement most of the programmes.[62]*

> *District Assembly Officer 04*

For the districts the timely disbursement of the DDF means that they are able to draw up appropriate plans for the use of these funds and allocate such funds to their various projects in such a manner as to maximise the benefits to their communities. The allocation of the DDF funds is based on the qualification criteria (as discussed in Chapter 5). In terms of the DDF funds the AMA met the qualification criteria for the 2009 financial year only, the TaMA qualified for years 2008 and 2010 while the Ga south district has qualified for the DDF funds every year since the inception, namely, 2008, 2009 and 2010. The Kumbungu district, however, a new district recently created but it did qualify for the 2010 disbursement. The sectors for which DDF funds have been used include education, health and water and sanitation as well as the economic sectors. However, in the four selected districts the DDF funds were spent primarily on education and health with education always commanding the larger share. The table in Appendix K provides a breakdown of the sector shares of the DDF funds in the selected districts.

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[61] See Chapter 5
[62] Author's fieldwork, 2012

7.3.2 Health Facilities and Resources

Similar to the patterns identified in the revenues of the selected districts, the health resources in the selected districts showed even wider disparities. Once again the two metropolitan assemblies showed the highest numbers of health resources both in total number and per capita terms. The Accra Metropolitan Assembly recorded 40 health facilities, 261 medical doctors and 1778 nurses as compared to the situation in the Kumbungu Assembly which recorded seven health facilities only and in all less than 10 medical doctors and nurses. Table 7.3 presents a detailed breakdown of the health resources in the selected districts.

Table 7.3: Health resources in the selected districts[63]

District	Accra Metro	Ga South	Tamale Metro	Kumbungu
Facilities /Ratio	40	3	33	7
District facility ratio	0.0153	0.0011	0.0126	0.0027
Doctors /Ratio	261	1	18	1
Doctors to population ratio	0.2328	0.0009	0.0161	0.0009
Nurses /Ratio	1778	1	340	8
Nurses to population ratio	0.1811	0.0001	0.0346	0.0008

Source: Author's own computation based on data from the DACF Formula 2013 Report

According to the participants interviewed in the rural districts even these low numbers in the health resources may be further reduced over the years as many of these staff members posted to these districts actually fail to report for duty or, even

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[63] For uniformity throughout the chapters the study relied on the DACF data for all statistics on districts where available

when they do report for duty, they soon leave when they discover that the conditions at the duty stations are undesirable. A participant from the Common Fund office explained this in the following statement when interviewed;

We have a lot of problems with the health workers. We have indicated that it is very fluid when it comes to the health professionals as they do not stay in places for long.[64]

National Officer 10

7.3.3   Health Priorities

The respondents from the selected districts admitted to setting health priorities for the districts on an annual basis. However, it was often left to the District Health Directorate to set these priorities and, as the directorate often used guidelines from the central ministries and planning guidelines set by the National Development Planning Commission (NDPC). The priorities set by the District Health Directorate tended to have a common theme and centre around national priorities in the area of health, driven primarily by the aim of attaining the MDGs in health. The comments of two of the participants sums up the situation;

"For now the country has priority health objectives, which are mainly geared towards the attainment of the MDGs by 2015, so naturally all districts will more or less flow in that direction. There are commonalities across board but then, when you go to certain districts, there are certain situations which are more acute than others and, therefore, the focus will be on those particular issues pertaining to those particular districts.

District Health Directorate Officer 04

Thus, in the comment quoted above, the District Health Officer indicates that all the districts tend work to achieve the nationally set priorities in the area of health.

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[64]Author's fieldwork, 2012

However, the extent of a specific problem in a particular locality may lead to a district focusing more on one priority than the other. The second district health officer presented a similar view, noting that his district had prioritised the MDG goals related to health care.

> *… Our main objective as a district is to make sure that women and children are adequately taken care of in terms of health, provision of services that will reduce maternal mortality, reduce infant mortality and even take care of HIV/AIDS. Those 3 goals, the MDGs goals 4, 5 and 6, are our main priorities.*"[65]

> *District Health Directorate Officer 02*

However, according to the participants, differences may also arise as regards the approaches which each district may apply to mitigate the particular health issues identified and also how effectively the specific strategies are implemented. A policy maker at the Ministry of Health explained this as follows;

> *"Universal priorities are there but strategy and initiative may differ from place to place, and it also may depend on particular conditions that may pertain within the geographic area and, in that vein, programmes can be fashioned to address these issues"[66].*

> *District Health Directorate Officer 01*

The information provided above indicates that the district health directorates formulate unique programmes to address the health priorities in their local areas. In the instances of the selected districts, for example, the Ga South assembly indicated a particular focus on improving the health infrastructure in the district. However, although this assembly does occasionally support programmes, this is because the

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[65] Author's fieldwork, 2012

[66] Authors fieldwork, 2012

assembly believes that health programmes are part of the core function of the health directorate which is budgeted for by the Central Ministry. Table 7.4 presents the priority areas and the specific focus of the sampled districts.

Table 7.4: District Health Priorities

District	Priorities	Specific Focus Area
AMA	Maternal Health Child/Infant Health HIV/AIDS	None
Ga South	Maternal Health Child/Infant Health HIV/AIDS	Health Infrastructure
TaMA	Maternal Health Child/Infant Health HIV/AIDS	None
Kumbungu	Maternal Health Child Health HIV/AIDS	Health Human Resources

Source: Author's Field Work, 2012

The participants from the Kumbungu district indicated that, as a rural and disadvantaged district, although they are not able to focus on any one or two specific items to the detriment of others, they are, however, extremely concerned about the inadequate health human resources in the area. A participant from the district also indicated that, although they are working closely with both pregnant women to encourage them to use the health services and teenage girls on sex education, they were experiencing a major problem with health human resources:

Our main problem here is getting trained midwives to do deliveries. Most of our deliveries are done by the Traditional Birth Attendants (TBAs) in the communities. However, we are doing whatever we can to encourage them to always come to the hospitals but we have few midwives in the district. For now we have only 3 and one is not well so we are left with only 2 and we have 10 facilities. So you can see that the two of them cannot be at all the facilities at the same time. Our community of nurses are doing that job. Sometimes they try to see whether they can deliver the emergency ones or, if not, the TBAs are doing those jobs.

District Health Directorate Officer 04

On the other hand, the participants from the AMA and the TaMA indicated that their efforts were very much evenly focused on all issues regarding maternal, infant and child health. They argued that this is the result of the large and cosmopolitan nature of their districts. As regards engaging with the District Assemblies in the setting of health priorities, the participants from the selected districts alluded to the fact that the assemblies were, in essence, not interested in these activities and would rather invite them to present after they had set the priorities and ask for copies for the District Development Plans. According to the participants this system worked well as it ensured minimum interference from the assemblies into their performing of their duties.

7.3.4   Funding of Health in Districts

The funding for health activities in the selected districts derived primarily from four major sources, namely, funding from the central government (Ghana Health Service), direct donor funding to the health sector, internally generated health funds and, finally, a degree of support from the district assemblies. As regards the funding of health activities within the districts all the respondents interviewed explained that, in view of the nature of decentralisation in the health system in Ghana, funds for health activities were transferred mainly from the central government to the district

health directorates. According to the District Assemblies they had no interaction whatever with these funds and the District Health Directorate did not often inform them of the exact amount of the funds they had received from the central government. This, in turn, implies that the District Assemblies were adopting a hands off approach, especially with regards to what they perceived to be the core functions of the health system. A participant explained in his interview;

> *Ghana Health Service keeps supporting them in the management aspects of health. So, and ironically, the health directorates' one reason why we sometimes shy away from taking full responsibilities of decentralised departments is that they do not want to be accountable to the district assemblies. What we have we share with them but, when they get from their mother agency, it is very difficult to get us informed about the resources they are getting from their mother agency and, for us, it is very difficult assessing their funding gaps.*[67]

> *District Assembly Officer 01*

Some of the district assemblies did, however, make an effort to support the health directorates but tended to stay aloof from the core function of the health system. However, of the four districts in which interviews were conducted; the Ga South District Assembly was the only assembly that had provided any support to the health directorate. According to their health directorates the TaMA and the AMA had not ever directly offered support in any form to the Health Directorate for projects.

On the other hand, the Kumbungu district, which was at the time of interviews a new district, had committed to supporting the Health Directorate but had been unable to do so mainly as a result of the lack of funds for the assembly. It must, however, be noted that, although direct requests for support from the health directorate are often turned down, the assemblies on their own often expend money on health, specifically on infrastructural support such as accommodation for out of town health workers,

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[67]Author's fieldwork, 2012

construction of health centres and clinics and the renovations of health facilities. One interviewee observed:

> *Since we came in January we have not received anything from the assembly. Though we have made request to the assembly for support they have not been able to give us anything for our programmes but I have seen that they are building a "nurses' quarters" and they have in their plans to do more and even to build more CHPS compounds. But when you are talking about support to carry out services they will not mind you. If you mention a structure I think that is what they are interested in so that people will actually see that they are working but, for them to support you, give you something to support you in providing the services, that one is a problem.[68]*

> *District Health Directorate Officer 04*

Tale 7.2 presents a breakdown of the support from the District Assemblies to the Health Directorates and a possible reason for the lack of support if this were, indeed, the case. The District Health Directorates of AMA indicated that they had not received any direct support from the assemblies, attributing this to the poor relationship between the health directorate and the assembly and also the fact that the assemblies believed the Health Directorates possessed adequate funds. However, this is said to be a misconception by the officers interviewed at the health directorates.

Table 7.2: Status of support to health directorates by assemblies

District	Status	Reason/s given
AMA	No	Poor relationship
Ga South	Yes	-
TaMA	No	Assembly feels health directorate adequately funded

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[68]Authors fieldwork, 2012

| Kumbungu | No | Lack of funds |

Source: Author's Field Work, 2012

7.4   Health Equity

In view of the limitation of the quantitative design in fully addressing the issue of decentralisation and its effect on health inequities in Ghana, the mixed methods approach which was used in the study enabled the study to address this issue in some detail. In order to do this interviews were conducted to obtain information from the respondents on their perceptions of inequity in the health system and how decentralisation had affected equity as regards the utilisation of health services. The discussion below presents the results of these interviews. The majority of the participants interviewed were of the view that inequities in the health services and the local services in general were better addressed within a decentralised system and that, in Ghana, this had, in fact, been the case. They noted, however, that this would happen only under certain conditions. In the specific case of Ghana the respondents indicated that decentralisation had, in fact, reduced the level of inequities within the system. They were, however, cautious as they explained that, although inequities had been reduced, in their opinion, this was marginal. They argued that many districts and regions continued to experience levels of health care utilisation and poor health outcomes as a result of a number of factors. These will be discussed in the second part of this chapter.

7.4.1   Defining Equity in the Ghanaian Context

It is important for the objectives of this thesis to determine how inequity is defined in the context of Ghana and also the role which the degree of importance ascribed to inequity plays in national policy. The review of policy documents and the analysis of the responses of the respondents indicated that equity is a major priority in both the design of the decentralisation programme at the national level and in the health sector reforms. One of the objectives of the Ghana Health Service Act is "to increase access to improved health services" (Government of Ghana 1996). In order

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to realise this objective it is essential that the health service in Ghana ensures access to the health services at all levels and that it "develop mechanisms for the equitable distribution of health facilities in rural and urban districts". In operationalising this the Ministry of Health (MoH) has as its main equity objective

> *... to ensure that every individual, household and community is adequately informed about health; and has equitable access to high quality health and related interventions (Ghana Ministry of Health 2003, p.8) .*

In a more recent document (GGSDA) the Government of Ghana continued to outline the following principal objective in the medium term, namely, *"Bridge the equity gaps in access to health care and nutrition services and ensure sustainable ..."*(Ghana Health Service. 2011, p.16). Overwhelmingly these official policy documents point to equity as regards access to the health services as the main goal of the health sector. This goal will be achieved through ensuring financial accessibility by means of the National Health Insurance Scheme and by improving access to both resources and health infrastructure (Ghana Health Service. 2011).

As regards decentralisation in terms of the current framework for the implementation of decentralisation in Ghana, one of the major goals of the Ministry of Local Government and Rural Development is the following:

> … to achieve sustainable, equitable economic growth and poverty reduction through citizen participation and accelerated service delivery at the local level within a decentralised environment (Ministry of Local Government 2010).

The specific objective of the social agenda reads as follows

> *To promote a rights-based orientation to local level development, ensuring equitable access to public resources and inclusiveness in decision-making* (Ministry of Local Governmnet and Rural Development 2003) .

Once again the policy document tasks the Inter-Ministerial Coordinating Committee on Decentralisation with overseeing the policy implementation, focusing on efficiency in service delivery and an equitable and sustained economic growth and poverty reduction at the local level. Policy documents prior to this (Ghana Ministry of Finance 2002; Ghana Ministry of Finance 2007)all pointed to the need to ensure equity as regards access to services as well as equitable resource allocation, both human and financial.

These observations were confirmed when the interviews revealed that, at all levels of the health system and the decentralised structures, the respondents clearly understood these objectives and admitted that the goal to ensure equity in the health system in general is important at the policy level.

> *The Ministry also has that policy of ensuring equitable distribution across board but, first, we must be able to define what is equitable. Basic services are a right so, when it comes to basic services, the Ministry of Health has targeted to provide that limited level of an equitable system.*[69]
>
> *National Officer 04*

The discussions revealed that, despite the fact that the need to ensure equity is paramount, the actual conceptualisation of what equity is remains a huge challenge. This is primarily because, in the context of a developing country where resources are scarce across all levels, promoting the needs of specific groups above others and systematically redirecting resources to such groups remain a massive problem. There is an intense fear that other regions and sectors will derail in their attempt to attain of equity goals and objectives and also a strong concern that scarce national resources should be shared equally.

The participants elaborated on the three main sub-themes with regard to equity which, if achieved, will ensure that the equity objectives are met, namely; equity in

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[69]Author's fieldwork, 2012

the allocation of resources, especially in the area of human resources, equity as regards access to health services and equity in the utilisation of health services.

In terms of equity in the allocation of resources, the respondents were keen to point out that, despite the years of decentralisation, little had changed in the areas of human, financial and physical resources. As regards the issue of equity in human resources, the respondents believed that the inequity transcended the issue of health sector workers to include the managerial capacity required to utilise the funds available. They felt that this would be best addressed or resolved under a fully decentralised system which would not only invest in training locally but which would also actually boost local capacity by dispatching staff to the lowest levels, meaning the districts.

As regards equity in terms of access to health services, the respondents highlighted the wide gaps which existed in the access to health facilities and the wide differences between the types of health facilities available as major constraints. They alluded to the fact that, at the time of decentralisation, the situation as regards the issue of access had been far worse than it was in the present situation. They noted that the decentralisation process had resulted in increased access to services as many districts and regions had focused on providing these services to their populations.

As regards equity in the utilisation of health services, the respondents highlighted wide gaps in the utilisation of services, even when access to such services had been improved. They also suggested that merely improving access to services may not address this problem as the use of these services does not only depend on their availability. According to the respondents, full decentralisation was an option in terms of safeguarding equity in the utilisation of services with local health managers, members of the district assemblies and residents of the local areas participating in decision-making about health. The managers would have solutions to the unique challenges in a particular location and which acted as a barrier to utilisation of the services. They believed that the evidence over the period illustrated this claim and,

thus, that it was necessary to scale up the decentralisation process with regards to the health sector in order to achieve the full benefits of the process.

7.4.2   Channels by which Decentralisation Reduced Inequities

The participants at all levels were emphatic in their belief that decentralisation had, indeed, reduced the inequities in health utilisation and that, were it not for certain challenges, inequities may have been further reduced under the decentralised system. Six main themes were identified based on the discussion and these are discussed below.

a. Increased Funding to Sub-national Level Health Programmes (Districts And Regions)

The interviews revealed that all the respondents strongly believed that a major channel through which inequities had been reduced under the current decentralised system was the provision of increased funding to the sub-national level structures. The district officials and policy makers pointed to the increased share of health funding being allocated to the districts and regional health directorates.

Financial decentralisation is also one of the key factors; in our budget we actually do allocate funds for the district even though we send the money through the regions. The district health directorates have their own funds and that money is not touched by anybody.[70]

National Officer 03

The participants also maintained that, at the level of the devolved District Assemblies, the increased access to funds was also responsible for reductions in inequities across the country that they perceived. However, many of the respondents were at pains to point out that this remained woefully inadequate. The respondents from the District Assemblies pointed out that, despite the fact that the district health

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[70]Author's fieldwork, 2012

directorates were still funded from central government and their funds did not come to the districts, they still made sure that they shared their funds between all the major sectors in the districts.

> *The problem with the assembly is that the funds have not been available that is why people think we neglect some sector departments. We try to allocate resources across sectors in a manner that there is a balanced development in the municipality.*[71]

> *District Assembly Officer 02*

The district officers interviewed admitted that the bulk of the funds were taken up by recurrent spending, especially in the case of the rural and deprived districts. However, they argued that they did try to maintain a balance in the sharing of the funding to all the sectors. They also pointed out that, since the Common Fund share had been increased by the DACF authority, all the sectors, including the health sector, has received higher proportions of the funding from them. They also explained that, whenever the districts were able to access complementary funding, be it from donors or government sources, for example, when they qualified for funds from the District Development Facility, the Urban Development Fund and other direct donor support, these funds were shared in such a way so to ensure that all the sectors benefit in some way at least. A district officer who was interviewed explained in this statement;

> *We however use our internally generated funds for recurrent activities because it is not even much. However with the common fund that one you have to spread it and every sector has a percentage of it.*

> *District Assembly Officer 04*

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[71]Author's fieldwork, 2012

It is worth noting that this view regarding increased funding for district programmes is well supported by the literature as studies have noted that decentralisation reforms have, in a number of cases, led to an increase in the level of fundings for health sector programmes (Schwartz et al. 2002; Robalino et al. 2004; Uchimura & Jütting 2009; Bossert et al. 2003).

b. Local Content and Context in the Operationalisation and Design of Health Policies

Although it would appear that in many cases the district priorities stemmed from the universal national priorities, the districts were able to operationalise these priorities and define them in such a way so as to suit their unique context. The respondents strongly believed that this was a major reason why decentralisation had helped in reducing the inequities in maternal health utilisation. The statements of two participants cited below illustrate the situation. The first example refers to the case in which a district which had been characterised by a low life expectancy had localised the national policy on free medical care to the aged by dropping the lower age limit to 60 years from 70 years. The district in question had presented that argument that the life expectancy in the district was extremely low and that, at 70 years, scarcely any of the aged residents of the district had benefited from the policy.

> *For instance, in one area in parts of the Northern Region, when we said that we are providing free services for the aged, and we pegged the age at 70 years some districts decided that, when we talk about 70, we don't get anybody to come for free services because a lot of them die before 70. So they pushed it down to 60, and decided to run the free services at 60. That tells you the power of the district.*
>
> *In fact with the free maternal services some of them have stretched the policy to the extent that it has meaning for them but, at the same time, keeping the*

objectives of the policy at the core. I think that we should also look at the
districts as having some level of autonomy – nobody forces them unless they
are implementing a policy counter to the national policy.[72]

National officer 03

The second narrative which refers specifically to free maternal health explains that many districts had been able to contextualise the national policy on free maternal health to pregnant women so as to meet the unique challenges of the local situations. The national officer from the Ministry of Health explained that the central government had understood this and that it had been acceptable as long the policy was in keeping with the direction of the national policy. The argument for localisation presented above has been presented in support of decentralisation reforms (Manor 1999). It was also evident in Chapter five of this study that the argument for localisation had also been presented as one of the motives for embarking on the health sector decentralisation reforms in Ghana (see Chapter five).

c. Innovative and Home Grown Solutions

The regions and districts have been extremely active in devising innovative and local solutions to the health issues that concerned them. According to the respondents this, in turn, had helped to address the issues of inequities between and within districts. A participant summed this up in his comments when he alluded to the fact that a few of the national level polices had actually been initiated by the districts and regions. Respondents argued that, when the districts and regions find innovative solutions to incorporate in their local and national programmes, this serves as a means with which to bridge the gap between the various regions and the districts in the country as a solution that works for one region may not necessarily work in another district. The respondents even went further, pointing out a number of instances in which the

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[72]Authors fieldwork, 2012

direction of national level policies had been guided and driven by innovation at the district and regional levels.

> *In fact, when you look at the cash and carry programme, when we were doing the full cost recovery the pre health insurance era, a lot of the direction we got from the programme was coming from the districts. Solely a district did its own health insurance as the first pilot and we learned from them. We do not fault them when they come up with innovations to help implement national policy.*[73]

> *National Officer 04*

This extract refers to the transition from the user fee system of health care, which was locally nicknamed the 'cash and carry', to the national health insurance. The respondent referred to the fact that, before the implementation of the national health insurance, districts had piloted the scheme through district mutual health insurance schemes. During these pilots the districts had also made modification and changes to the scheme and these had been included in the full implementation of the national health insurance scheme.

d. The National Health Insurance Scheme

It was clear that many of the respondents were of the opinion that any discussion on the role of decentralisation in reducing inequities in health care utilisation would remain incomplete without a discussion on the National Health Insurance Scheme (see Chapter 5). The respondents contended that the National Health Insurance Scheme had been the single, most important factor in mitigating health sector inequities in Ghana in terms of both access to health and the utilisation of health, particularly in the case of maternal health care. The arguments presented links between the ability of communities and districts to provide innovative solutions to

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[73]Author's fieldwork, 2012

health sector programmes, specifically, and the overall national development programmes.

Since mid 2008 the scheme has included all pregnant women as an additional excluded groups (Sarpong et al. 2010). The aim of this change in policy was to help the country to achieve the national and global maternal health goal. Studies have shown that the health insurance scheme has increased the utilisation of formal health care, especially as regards maternal health (Blanchet et al. 2012; Mensah et al. 2010; Brugiavini & Pace 2011). However, major criticisms of the scheme include its failure to reach the most vulnerable groups in the country, including the poor, as a result of factors such as the costs of enrolment and an inability to identify the poor (Witter et al. 2009; Witter & Garshong 2009; Frempong et al. 2009; Brugiavini & Pace 2011; Jehu-Appiah et al. 2011; Asante & Aikins 2007; Mensah et al. 2010). Nevertheless, the respondents pointed out that, despite these challenges, the national health insurance scheme, which was initiated primarily by the district assemblies, has contributed to reducing inequities, especially in the area of maternal health care, by ensuring that all pregnant women within both the regions and the districts have access to free maternal health care.

The respondents also did admit that the cost of accessing care, which is often exacerbated by the lack of health facilities in the poorest communities, thus implying that the poor have to pay more as compared to other groups in terms of transportation and other costs when utilising the free maternal health care feature of the NHIS, does not help to reduce inequities as the least advantaged have to pay the most. The respondents also expressed concern about the prevailing situation since the establishment of the NHIA with insurance schemes operating independently in the districts without direct oversight by the assemblies that created them. A policy maker at the district level explained this in the narrative below.

> *The health insurance was started by the district, the districts were tasked to put up infrastructure, recruit and ensure that it is workable. Here we put up*

the physical structure, recruited the initial staff and provided logistics and furnished the offices to ensure that there was a take-off. But, as I speak now, this has changed, because the NHIS law has been passed and the NHIS is a bit decoupled from the districts' direct intervention. So, although the district maintains overall supervision and oversight responsibility, the direct implementation is between the district NHIS office, the regional office and the national office.[74]

District Assembly Officer 02

e. Increased Responsiveness in Combating Health Issues

Another reason for the reduction in inequities which was discussed by the respondents was the increased responsiveness of local health managers to health issues. In this regard the respondents alluded to the fact that the proximity of both the district health directorates and the devolved district assemblies to the citizenry had resulted in an increased responsiveness to health issues at the local level. A participant explained further by citing the example of a situation in which an outbreak of cholera in the local community had been reported immediately reported to the district health director by members of the community who had then taken the district health director took him to the local water source which they believed was the source of the problem. The Health Directorate had immediately embarked on public education campaigns to inform the people not to use the water source. The respondent pointed out that the speed with which this had been achieved had been possible only as a result of the fact that the district health directorate had been near enough to the people to be able to see the problem while the directorate was also empowered financially to be able to provide an immediate solution to the problem.

However, the respondent was keen to point out that the nature of the decentralisation had restricted the health director's ability to resolve the problem fully, explaining

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[74]Author's fieldwork, 2012

that, although the director had had the funds required to construct a borehole as an alternative water source, under the current decentralisation system, district health funds could not be used for such a purpose and the assembly had not had enough funds to construct the borehole. He argued that such a situation would not have arisen under a 'fully devolved' system of decentralisation where the health directorate would have been under the complete control of the district assembly and would have had the power to redirect the funds. It is worth noting that this finding is also supported in existing literature.

f. Support and Collaboration between the District Health Directorate and District Assembly Structure

The final channel which the respondents identified as a means by which decentralisation was believed to reduce inequities was through support from the devolved district to the health directorate. The respondents from all levels and sectors revealed that, although support from the District Assemblies to the health directorates could be improved. They however pointed out that Assemblies in many ways the already provided significant support to the health directorates in the carrying out of their mandates, in some instances at the request of the Health Directorate and, in other cases, independently. The respondents believed that this played a significant role in reducing inequities in the various districts. This support included both financial and physical support such as renovating clinic and hospitals, constructing health facilities and providing housing for out of town health workers. The respondents also pointed out the positive externalities from other programmes and projects of the Assemblies such as the tasks of the district public health officers including;

> *And what we also do is that, if there is a programme to be done by health, for instance, immunisation programme, the Assembly certainly does not fold its hands. We know sometimes there are plans from their central level or the*

Ghana Health Service has a programme which it implements at the District Health Directorate but what happens is that, once it is within our jurisdiction, we co-finance. For instance, if the Health Directorate is trying to distribute mosquito nets and it receives the mosquito nets from the Ghana Health Service or the Ministry of Health, assuming we are going to do such a programme and it comes here, may be the responsibility of getting certain resources like transportation, vehicles, fuel and may be some resources for the distribution, the assembly takes up that.[75]

District Assembly Officer 04

In the narrative above a District Assembly officer explains how the District Assemblies continue to provide support to their health directorates even when the programmes are initiated by and funded from the Ghana Health Service headquarters. He used the example of the national immunisation day programme to explain how the District Assembly had provided additional funds for a programme that had been funded by the Ghana Health Service. The District Health Director argued that the additional funding is often necessary because, although programmes are often designed by and initiated from the central Ghana Health Service offices they expect the District Health Directorate also to use its available funds to support such programmes.

However, in many instances, the District Health Directorate has either not allocated funds to support such programmes or do not have sufficient funds to do this. In the case of the immunisation day example cited above, although the programme had been initiated at the national level the Ghana Health Service had only provided the treated mosquito nets. There had been no additional funds provided for transportation and paying volunteers. At the request of the Health Directorate the District Assembly had stepped in and provided vehicles and fuel to assist the

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[75]Author's fieldwork, 2012

distribution of the mosquito nets to hospitals and even schools in the district. The District Assembly had also recruited and paid volunteers.

The participants also admitted that corroborating with the District Assemblies remained arbitrary to the extent that it sometimes depended on individual personalities or the officers (see chapter 5). This is further explained in section 7.5a below. Collaboration between the Health Directorate and the devolved District Assemblies has created the opportunity for these bodies to come together and develop insights into local problems. The respondents indicated that, in many instances, and especially in the rural and deprived districts and regions, it is often the case that these two bodies have no choice but to find a way to work effectively together to serve the people. When this happens they are able to bring about improvements in the local situation.

This is especially obvious in the District Social Committee, which brings together the heads of all the social sectors within the district. In addition, all the heads of units, including deconcentrated units such as health and education, attend district management meetings. These meetings afford the opportunity for the district coordinators to be given progress reports on the individual sectors especially those sectors that do not come fully under the devolved structure of the assembly. These meetings also provide the heads of the deconcentrated units with the opportunity to receive input from the assemblies and, even in some cases, reports on problematic sectors at the local level. The participants were of the opinion that this approach merits further improvement and should be implemented in all districts as it is already contributing significantly to improving health at the local level and, thus, reducing inequities.

7.5   Threats To Equity In Ghana's Decentralised Health System

The respondents also went further, seeking insights into the specific threats to equity that still existed in the decentralised system. They suggested a number of reasons and conditions that perpetuate inequities in Ghana's decentralised system. In line with the political economy model discussed in Chapter two this section examines the factors that threaten equity in the health system in Ghana's decentralised system. Evidence from the interviews suggested that these factors were political, economic and ecological. The respondents also pointed out that the political factor plays a major role in the ability of decentralisation to mitigate inequalities. These political factors included issues such as the lack of the political will to roll out a fully decentralised system in which power is vested in the districts that are, ultimately, accountable to the people within their communities. Many of the respondents also referred to the balance of power between districts, between the central government and the districts and even between the Ministry and departments as a major contributing factor affecting the ability of decentralisation to mitigate inequalities.

7.5.1   Political Factors

Several of the participants cited political factors as the cause of the continuing inequities in health in Ghana's decentralised system. Many of them were unable to understand why, over a decade after the implementation of decentralisation reforms, there had been very little actual progress in the area of devolution with departments and agencies in the central government continuing to wield more power over developmental activities in the districts than the assemblies themselves. They believed that this was attributable to the fact that the politicians did not want the status quo to change because of self-interest.

a. Political Character of the District Assemblies/Assemblies as a Tool for Achieving Political Objectives

Several of the officers interviewed alluded to the fact that the political nature of the devolved structure impacted significantly on disparities in the health sector. This is especially the case as the political heads of the assemblies are not elected directly by the people but are appointed by the President of Ghana and endorsed by the majority of assembly members. Many of the policy makers interviewed were of the opinion that this has resulted in a situation in which these political heads of the assemblies believe they are accountable exclusively to the president of the country and not the citizens or the members of their communities. This, according to the participants, afforded the national political leadership a means by which they are able to use the assemblies and, specifically, funds from the assemblies to realise their political objectives. However, it appeared that the respondents felt that the chief executives, who contributed significantly to the electoral victories of political parties, were seen in favourable light and, thus, it was probable that they would retain their positions.

The nature of the political patronage system in the appointment process is such that many of these chief executives are not, in fact, technical people and have varied levels of education. For a number of the participants, primarily those from the District Health Directorate, this often results in difficulties in understanding issues and problems of a complex nature. The majority of the District Directors of Health Services and technocrats interviewed viewed this as a major issue. They argued that the politicians prefer to spend money on physical infrastructure such as hospitals and clinics as they feel that, when built, such hospitals and CHPS compounds are extremely visible to the electorate and reflect signs of tangible development. A respondent from the Ministry of Local Government and Rural Development explained this as follows;

> *The political nature of the district assemblies also means that they are interested in spending the Common Fund only on buildings and physical items that they can show at the end of the four years in office for election purposes. So if you are unlucky and your assemblyman is not highly educated enough to understand the issues of health, it is very difficult to get support for*

health activities and all your health sector support is spent on building clinics and CHPS compounds, even though there are no officers to work in these clinics

National Officer 04

The average politician thinks more of physical structures than programmes because that is palpable and, in campaigning, that will be attractive to win him votes rather than saying 'I have conducted so many training courses and capacity building and I have done this sensitisation'.[76]

National Officer 03

Thus, the participant cited above was arguing that the nature of decentralisation as a political process means that the governing elite is, above all, interested in appeasing the citizens with visible signs of progress to ensure their very political survival. In terms of progress and development this implies that attention is focused on the tangible and visible aspects of development to the detriment of intangibles.

The views of the participants once again bring to the fore the nature of the decentralisation system in Ghana. Riker (1964) argues that, under a centralised "local" government system in terms of which local authorities are not elected by local citizens but rather they are selected by higher level authorities, accountability does not filter downwards to the local citizens. In such a situation the local authorities feel obliged to the central government and there is a strong incentive on their part to respond to central governments priorities and in the case of Ghana, to the priorities of the Executive (Faguet 2014). Faguet further points out that the incentives to respond to local needs are stifled (Faguet 2014) and, as in Ghana's case, the local citizens are often appeased with physical infrastructure which is tangible. In the arguments presented above the participants indicated that the incentive to provide such physical infrastructures is, in most cases, driven by the

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[76]Author's fieldwork, 2012

demands of central government. Smoke (2003) presents similar arguments when he points to conflicting central political and bureaucratic incentives as a major hindrance to decentralisation. However, in such a situation decentralisation, in which the local officials' terms of office are in the hands of the citizens they serve and who elect them, would rectify the situation(Faguet 2014).

b. Unequal Power Relations/Incomplete Nature of Decentralisation

At a much higher level the power dynamics between the Ministry of Health and the Ministry of Local Government (the sector ministry in charge of decentralisation) have been identified as a major reason why inequalities continue to exist in the decentralised system in Ghana. The proponents of this argument believe the inequalities will continue for as long as the decentralisation process remains incomplete. The reason for the incompleteness of the decentralisation process is that the more powerful ministries which, at the passing of the decentralisation law, had been sceptical and, thus, had not fully committed to decentralisation, continue to remain outside the decentralised structure. Many believe that the Health Ministry is extremely powerful as a result of factors such as the control of large amounts of money and the nature of health itself. According to the participants both the Health Ministry and the Ghana Health Service had been afraid that, should the health sector be placed under the control of the district assemblies, the assemblies may have become too powerful.

> *… but these strong sectors tried to pull out because they felt that, if they come under the District Assembly, the local government may become too strong. So, they tried as much as possible to pull out, so in a subsequent legislation it was ensure that the Health Service was put in place so that they had their own service …[77]*
>
> *National Officer 06*

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[77]Author's fieldwork, 2012

From the beginning it was realised that it would not be possible to make the District Assemblies responsible for development if they were not permitted to participate in the major aspects of development such as health and education. Attempts were subsequently made to ensure that these sectors were effectively brought into the national decentralised system and that they worked under the local governments. However, all such attempts have proved to be futile and meetings were held without any concrete outcomes. A participant described this situation as follows:

> *It was realised that, if the local governments are responsible for development and you take key social sectors like education and health out, I mean what would be left? ... I know because I am also a member of the Ghana Health Service Council and, from their internal discussions, have always been uncomfortable about working under the district assembly.[78]*

> *National Officer 06*

The memo presented in Appendix J invited staff (Directors and Deputy Directors) of the Ministry of Health to discuss the full decentralisation[79] of the health sector. However, several of these memos have had no response. In addition, the Ministry of Health representatives often did not attend these meetings while, where they did attend, no concrete decisions were made. The general view of participants was that this situation has resulted in both gaps in the devolution process and a lack of structures. The health sector participants in particular highlighted the absence of an appropriate structure for monitoring and evaluating the health sector's performance and even for the financial management of the sector. These gaps are a result of the incompleteness of the decentralisation process which continues to undermine the system's ability to eliminate inequities in health.

c. Ad Hoc Nature of Cooperation between the Health Sector and the Devolved

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[78] Author's fieldwork, 2012

[79] The devolution

District Assemblies

The nature[80] of the health decentralisation described so far indicates that the level of cooperation between the District Health Directorate and the devolved District Assemblies varies significantly between districts. In addition, the level of cooperation is also sometimes heavily dependent on the nature and characteristics of the officers occupying various posts at the respective departments. This, in turn, has resulted in a system where, in some parts of the country, the DAs are highly engaged with the District Health Directorates and are supportive of their actions. In such districts the two bodies work well together to meet the common health priorities and goals set for the districts in question with both bodies being involved in setting these priorities and goals. On the other hand, in other districts there are definite lines of division between the two bodies with District Health Directorates barely engaging with the District Assemblies. The following two statements of respondents explain this;

> *When the relationship between the offices is strained it means any request we make to the District Assembly, especially for financial assistance, is outrightly turned down and, of course, they are unable to monitor our work as we do not report to them [81]*

> *District Health Directorate Officer 01*

> *I also think that support to the people should not be based on the way the individual does his or her things; we should have legislations that would mandate us to do. If, for instance, there has not been co-operation, then how do we achieve the organisational goal and the MDG goals?[82]*

> *District Assembly Officer 03*

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[80] The failure to integrate the health sector fully into Ghana's decentralisation structure of administration has lead to what appears to be a parallel system of decentralisation operating in Ghana's health sector.

[81] Author's fieldwork, 2012
[82] Author's fieldwork, 2012

The first respondent explained that the relationship between the health directorate and the assembly was strained and that this, in turn, had lead to the situation where requests for support from the assembly were almost invariably turned down. The assemblies had also reported that they had not provided any support at all to the health directorates (see sections 7.3.4 and Table 7.2). The respondent, who was from the health directorate, also indicated that the result of this situation was that the assembly was also unable to effectively monitor the activities of the officials. In the second quote, a respondent from a District Assembly passionately argues that personal relationships between officers should not impinge on their carrying out of their national duty.

The nature of the current decentralisation process means that inter-personal relationships between officers are essential to enable them to work together to realise their set objectives.
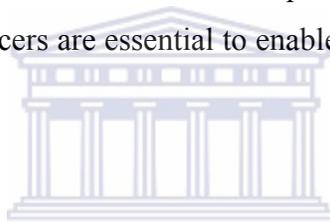
7.5.3   Economic Factors

The majority of the officers interviewed were of the opinion that health inequities and disparities were attributable primarily to underlying disparities between the economic conditions in the districts and also between individuals in the districts – a distinctly materialistic view of inequalities. These respondents maintained that these gap/s between the various districts in the country would be closed only if the districts were all economically empowered and resourced to be able to finance the health sector and to lift their populations out of poverty in a sustainable manner. These interviewees believed that the lack of financial strength of the districts was a major threat to equity in health. They attributed this lack of financial strength to a number of factors including the districts' inability to generate funds internally as a result of their socioeconomic profiles, a failure of the governmental transfer system to bring about equalisation and the slow pace of fiscal decentralisation.

a. Levels of Poverty within the Districts

Poverty and the living conditions of individuals in the district were cited as major factors contributing to the inequities that persist in health utilisation in the decentralised system. Many of respondents stated that, even where the health care for mothers and children was basically free at public health facilities, the poor were unable to make use of these services. One of the reasons for this was that the majority of poor people are not able to take time off work to access these services. In addition, the low level of education and literacy among the poor also means that they often do not understand the need for maternal health services. A participant explains this as follows;

> *You know, my people are poor and often do not understand the reason why they should seek these facilities out ... if you go to a place like Accra where the people are not so poor, they already understand the need to go to the hospital.*[83]

District Health Directorate Officer 04

Finally, many pregnant women are not able to afford the cost of treatment as, despite the fact that the national health insurance provides all pregnant women with free maternal health care, there are still several costs involved in accessing these facilities. These costs include lost incomes to the family during visits to the hospital and the cost of transportation to the health facilities which, in many rural areas, for example, districts such as Kumbungu and a large part of the Ga South District, are few and far between. In a recent news item on the only hospital facility, a private hospital in the Kumbungu district had been forced to close down as a result of the non-payment of bills by policyholders by the National Health Insurance Authority. Thus, this meant that pregnant women and children no longer had access to the facility and were required to travel long distances to the regional hospital in Tamale, the regional capital.

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[83]Authors fieldwork, 2012

b. Level And Types Of Economic Activities

The respondents indicated that the types and level of economic activities within their districts affect the districts' ability to generate revenue for development. In many of the rural districts, the bulk of the economic activities carried on are non-market transactions and the citizens rely primarily on subsistence farming, selling only the surplus of what they produce. However, few of these surpluses are sold in a formal market environment and often the transaction often takes the form of barter trade with neighbours. This, in turn, means that the assemblies are seldom able to tax or levy these activities in order to raise the revenues needed for development purposes. A respondent from a rural district described this situation as follows.

Unlike Accra, where they have numerous filling stations and shops to collect levies from and generate income, for us, in Kumbungu, our only source of revenue comes from the market and even that is nothing much compared to what they make in Tamale and Accra.

District Assembly Officer 06

Prior to decentralisation budgets were coming to the Ministries Departments and Agencies (MDAs) from the regional level and all departments used to get appreciable level. But the DACF formula has in it an element based on how much revenue you are able to generate and also based on service pressure, which I think is erroneous. Allocation should be based on the level of poverty and deprivation of the district. This means that we the poorer districts who do not have enough hotels, restaurants, fuel service stations and large market do not get enough property rates to generate revenue. And districts such as Accra get high revenues, which is then matched by the common fund allocation. I believe this issue must be rectified immediately to help the poorer districts.

District Assembly Officer 06

In the narrative above the respondent, a District Officer from a rural district, highlights the gaps in revenue generation between the rural and urban districts. The respondent argues that, while urban districts such as the AMA, have a number of revenue sources from mainly local economic activities, and the district relies solely on revenues from the market in the largest town of the district. In small towns and villages market are only held one day in a week and, thus, these markets do not generate sufficient revenue for the district. In the second narrative presented, another district officer points to limited revenue sources for poorer districts. This viewpoint is supported by the comments made by a national officer from the Ministry of Finance. This officer reiterated that the rural districts have extremely limited revenue sources. He cited the example of the district in which he had formerly worked before moving to the Ministry of Finance. This district had depended on the revenues from the market day, which he indicated as the equivalent of GH60 (15USD) a week as revenue.

> *When I was in the district I was in Savelugu-Tatale; those days when the Common Fund delayed for even one month, the assembly had to wait for the fund to come because there was no money. The money we got was always from the market and there was only one big market. If you convert the revenues from those days to Ghana Cedis right now it would be only 60 Ghs for a week to run the whole district.*[84]

> *National Officer 01*

c. Inability of District Assemblies Common Fund to carry out Equalisation Function/a Bolder Approach to Redistribution

In view of the widely acknowledged disparities in the districts transfers from the central government, such as the District Assemblies Common Fund should adequately compensate the resource poor districts. The reliance on the District

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[84]Author's fieldwork, 2012

Assemblies Common Fund to do stems from the fact that it is the only source of the funds, apart from the internally generated funds, that every district receives, irrespective of performance, as it is constitutionally mandated that each district should receive funds from the District Assemblies Common Fund. However, according to the respondents, the Common Fund has never satisfactorily performed the equalisation role with the result that *"to those who have more is always given"*. Existing disparities, therefore, continue unabated. The respondents believed that the extent of the gaps between the districts in terms of their ability to generate IGRs is so huge that the only way in which the DACF may ever play any equalisation role would involve a bolder approach to redistribution than is the case at present. A participant in the interview in his comment even called for the exclusion of economically strong districts from the fund altogether.

> *We have been advocating for a law to say that strong and highly endowed districts should not be entitled to the Common Fund but the constitution says, no, you still have to give them, no matter how much they are getting.*[85]

National Officer 01

Under decentralisation many countries have attempted to use the national system transfer to local governments to rectify fiscal disparities between districts (Oakland 1994; Bucovetsky & Smart 2006; Braathen 2008). However, the design of these inter governmental transfer system has been identified as one of the most challenging tasks in local government (Steffensen 2010). It has been suggested that a policy of equalisation could eliminate the fiscal benefits of superior natural resource endowment (Oakland 1994). A number of countries, including Tanzania, Uganda, Denmark and Cambodia, have used equalisation grants with mixed results. However, these equalisation grants are seldom used alone. Obwona and Steffensen (2000) note that, while equal shares have their benefits, when exaggerated, they may result in adverse incentives and inefficiencies in allocation.

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[85] Author's fieldwork, 2012

In the case of Tanzania, Braathen (2008) points that an initial grant system had reinforced existing inequities in service delivery between the local governments and that this had resulted in the need for an additional equalisation grant. It emerged from the discussions held with policy makers in this study that the elements of the Ghanaian formula as presented in Chapter 5 do not give adequate weight to the need criteria in the formula and, hence, the formula is unable to redress existing imbalances in development. It would appear that efforts at equalisation have had mixed results. Oakland (1994) suggests as a solution that such efforts should be tailored to the outcomes sought and the unique context of a country.

c. District Capacity

The final economic threat identified by the respondents related to concerns about the capacity of districts to support and manage the health sector. The respondents spoke about the capacity to utilise the funds available and manage the health sector effectively. This is closely related to the issues of manpower quality and availability across the various districts. They believed that this was also related to the challenge arising from the resultant lack of capacity to monitor the sector effectively. These were intricately linked with the technical capacity of the various districts.

As regards the capacity to utilise funds and manage the health sector, the policy makers at all levels highlighted the wide variations in human resources available across the districts. They maintained that this constituted a huge challenge, especially as regards the rural areas that often have to contend with lower levels of educated staff. Researchers have often pointed out the difficulty involved in attracting highly skilled, educated and trained personnel to individual districts (Steiner 2005; Prud'Homme 1995). It is worth noting that these capacity concerns were raised at the levels of both the district health directorates and the devolved district assemblies. The respondents expressed the following views;

Capacity is an issue and we cannot run away from it – it heavily affects the ability of the districts to perform in the first place. That was the major snag we had to go through as we designed the scheme.

National Officer 01

The capacity of people we put at the district level is much higher than sometimes even that of the district assemblies. In fact, some of the district chief executives, our district directors of health, are much more, I mean, are even sometimes better educated than the District Chief Executives.

National Officer 03

Basically, nothing, the assembly does not engage with us at all. When it comes to monitoring and evaluation also, the district often does not feel they have the capacity to do it. This is mainly because they feel that health sector work is more technical and so they leave us to do our thing and report to them at the management meetings.

District Health Directorate Officer 01

In the three extracts two national officers and a district officer describe the challenges encountered as regards capacity under decentralisation and which they believe have a significant impact inequities. In the first extract a national officer asserted that capacity was and remains a challenge. In the second extract a national officer from the health sector highlighted the fact that, although capacity issues exist in both the health directorate and the devolved assemblies, the health sector is, at least, ensuring that the staff members at the district level are more qualified even than the District Chief Executives. He also pointed to the fact that the District Health Directors tend to be far better educated than even the heads of the devolved units. The final extract from a respondent of the district health directorate indicates that district staff often feel that they are often not equipped to deal with the technicality of health issues. Capacity challenges have often been identified as a threat to

decentralisation reforms and their ability to reduce poverty and inequality in a sustainable way (Steiner 2005; Prud'Homme 1995; Crook & Manor 1998). The effect of such capacity challenges on inequality is even more severe when human resources are distributed as indicated by the analysis in Chapter 6 and which revealed wide variations between the various districts.

7.5.4 Ecological/Spatial Factors

a. Differences in Resource Endowments

A major factor affecting inequities in healthcare and that was cited by all the respondents was the differences in resource endowments which significantly affected the revenue generation abilities of the districts. The representatives of the districts, especially those located in rural areas and small towns, argued that, as a result of small population sizes and the limited number of formal business, the sources of revenues available to them remain limited as they are not able to generate sufficient IGRs. In addition, on the issue of resource endowments, several respondents cited the differences between the districts located in the resource rich areas in the southern half of the country and those located in the northern regions. The participants cited the examples of a mining area or a timber forest area where, according to them, the royalties from these resources made a significant difference in terms of access to revenue to support the provision of social services locally.

In addition, many of the companies located in these well-endowed areas initiate specific projects in terms of corporate social responsibility and also as means of engaging with the locals. These natural resources made a significant contribution to supporting what the districts were able to provide for the citizens, for example, hospitals established by the Anglogold Company in Obuasi and the Newmont mines in Kenysai. Another example provided was that of companies located in the districts such as Accra helping the AMA to do away with the shift system in basic schools by

supporting the assembly to build new schools. The respondents argued that, even in cases in which such companies do not explicitly support the districts, the districts derive significant positive externalities as a result of the fact that the companies are located within their boundaries. In addition, many of these companies provide a social infrastructure for use by the staff and senior management and this, in turn, improves social conditions in the districts. This argument clearly illustrates the role of ecological factors in perpetuating inequities in Ghana's decentralised system.

b. Proximity to the Central Government

The issue of proximity to the national capital was identified by all levels of respondents during the interviews with some of them indicating that the proximity of certain districts to the national capital means that these districts have more power in terms of the control of and access to health resources as compared to those districts that are further away from the national capital. The majority of the participants who presented this argument were from the Northern districts. They argued that, when the budget are drawn up in Accra (national capital) for specific programmes, even in the Ghana Health Service, those districts which are further away from the capital are disadvantaged in that they are not able to fight for their rightful allocations. These respondents indicated that this, in turn, often meant they were unable to meet their objectives while the districts nearer to the national capital continued to fare better in their health outcomes, thus exacerbating the disparities in health utilisation. A planning officer also argued that, as compared to those districts further from the national capital, those districts which are nearer to the seat of government are better able to influence allocations while they also have better access to donors as many donor offices are located in Accra.

However, although the respondents perceived this issue as a challenge, Akramov & Asante (2008), in assessing the importance of geography and ethnic diversity in decentralised local public service delivery found distance to the national capital not to be significant. It must, however, also be noted that this issue of distance to the

national capital is closely related to other geographic factors such as ecological zone and distance to regional capital which Akramov and Asante (2008) found to significantly affect the access to local public services.

7.6   Limitations of the Analysis

An issue that often arises in qualitative analysis and research is the generalisability of results. This, in turn, raises a question about the external validity of this study which was based on the selection of four districts out of the possible forty two from the two regions in the country. However, although this may seem a valid question, Creswell & Miller (2000) argues that external validity does not play a major role in qualitative inquiries while Brinberg & McGrath (1985, p.13) point out that "*Validity is not a commodity that can be purchased with techniques ... Rather, validity is like integrity, character and quality, to be assessed relative to purposes and circumstances*". In view of the fact that qualitative research focuses primarily on understanding specifics rather than generalising to universals, the choice of a sample size depends mainly on what the researcher is seeking to understand. In the main validity depends on the extent to which an account is accurate and the findings are interpreted in a correct way. Finally, Campbell & Fiske (1959); Jick (1979); Webb et al. (1966, p.174) Campbell & Fiske (1959), Jick (1979) and Webb, Campbell, Schwartz & Sechrest (1966:174) propose that triangulation provides an acceptable solution to the search for validity in research. Triangulation will be attempted in the concluding chapter of this study.

The second issue to be addressed is the question of the potential bias associated with the purposive sampling technique which was used in both the selection of the districts for analysis and also the selection of the respondents for the purposes of the interviews. In a situation in which qualitative techniques are used, the extensive nature of interviews implies that the researcher due to time and cost limitation may be limited to fewer sources of information. Thus, a major criterion used in the

selection of information sources was the selection of information rich cases and respondents whose roles meant that they interacted on a daily basis with the decentralised structures. The thesis mainly sought to address the issue from the viewpoint of policy makers and thus focused on policy makers within the decentralised structure and the health system who had direct interactions with the decentralised systems. In the case of this thesis the changes in the number of district number (increasing) meant that a primary objective was to find districts that had been in existence for a number of years[86].

7.7   Chapter Summary

This chapter focused on the analysis of interviews which were conducted in the four districts chosen and with the national level officers selected in order to assess the inequities in Ghana's decentralised system. The respondents argued that they believed decentralisation had reduced inequities in health utilisation in Ghana. However, they insisted that inequities within the districts remained an issue of concern as the various regions and districts had attained varying levels of health and utilisation of the health services. The arguments presented by interviewees revealed that the major threats to equity within Ghana's decentralised health system were of a political, economic and sociocultural nature.

Specifically, political factors such as a strong political will on the part of the governing elites, the power relations between various stakeholders in the decentralised structure, the political nature of the districts and the assembly system itself posed significant threats to the attainment of equity. The economic factors identified included the economic endowments of the district, the level of poverty and social deprivation within the districts, the levels and types of economic activities in the districts and the inability of the DACF and other transfer funding mechanisms to

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[86]This requirement was not met in the case of the Kumbungu district when it was detected that, although Tolon, the selected district, had existed for a while, on the division of the district the Kumbungu district had retained most of the original staff and, thus, the participants from Tolon were not in possession of much information.

foster equalisation between the more endowed districts and the less endowed. There were also a range of sociocultural and other factors identified which all contributed to the levels of inequity in the health utilisation.

A major question arising from the theoretical discussion and the analysis of the interviews and which remains unanswered is as follows: "At which level should equalisation be tackled – at the local level or at the national level and, specifically, in the case of a developing country where there continues to be obvious gaps in the social and other infrastructure." To many of the respondents this was a very obvious question and they were in no doubt that the redistribution function should be performed at the national level with the aid of transfers from the central government to the districts. Another major issue was that many of the districts officers interviewed strongly believed that, with the aid of transfers and economic empowerment, decentralisation was the solution to the inequities that exist in health utilisation. With the help of the interviews which were conducted on the national level and the discussions in previous chapters these questions and issues will be addressed in the final chapter. This chapter will all contain a summary of and conclusion to all the preceding chapters.

Chapter 8

Conclusions and Policy Recommendations

8.1   Introduction

This chapter contains a summary of and the conclusion to the thesis. The chapter is organised in the following way. The chapter begins with a conclusion to and synthesis of the quantitative and qualitative elements of the study, focusing on the key findings. The chapter then provides a synthesis of the results and outcomes of the study, focusing on elements such as the contribution of the study to policymaking and development, to theory building on the issue of decentralisation and inequity in general with a specific focus on the health sector and also to the empirical academic discourse in developing countries specifically and in the global academic community as a whole.   The chapter also outlines the gaps that continue to exist in the exploration of the question on decentralisation and equities, indicating the limits of the study and outlining areas for the future consideration of researchers. These are then summed up in the concluding remarks to the study.

8.2   Conclusions and Synthesis of Outcomes

The study used a mixed methods design to realise the research goal of examining the effect of decentralisation on health inequity by addressing two research objectives which were, in turn, operationalised through a number of research questions.

The first research objective was achieved using quantitative techniques to examine the effect of decentralisation on equity in the utilisation of maternal health services in Ghana. In achieving this objective the study provided a description of maternal health utilisation in Ghana and conducted a detailed analysis of the inequities that have persisted in health, in general, and maternal health care, specifically, in the two years assessed (2003 and 2008).

The second objective of the study focused on understanding the factors that have influenced health inequities in Ghana's decentralised system. In order to do this the study examined the conceptualisation of inequities in the Ghanaian context, explored the level/extent of decentralisation in the Ghanaian health system, examined the motivations, from the perspective of the policy maker, for health sector decentralisation and outlined the major threats that to health equity in Ghana's decentralised system, also from the perspective of the policy maker.

The outcomes of this qualitative analysis revealed that, as discussed, the quantitative results were complemented by the more nuanced qualitative assessment. However, the qualitative analysis went further than the than the quantitative investigation by providing reasons why these situations persisted in the unique context of Ghana from the viewpoint of the representatives from selected districts. Studies that have previously assessed the impact of decentralisation on inequities and inequalities in health, including the studies of Zhong (2010); Costa-i-Font (2005) and Jiménez-Rubio et al. (2008), have focused primarily on a quantitative examination of these inequities. Zhong (2010), in particular, argues for the need to explore beyond the quantitative analysis and understand the deeper issues relating to the basis of decentralisation as well as the channels through which decentralisation has impacted on inequities. This viewpoint of Zhong (2010) together with the fact that a majority of these studies focused on developed country contexts affirmed the choice of a mixed methods strategy for the thesis. This strategy provided a broader understanding of the means by which decentralisation has affected inequities and also the reasons why inequities persist in Ghana's decentralised system than would otherwise have been the case. The paragraphs that follows provides a detailed breakdown of the conclusions reached by the study.

8.2.1   Assessment of the Level of Decentralisation of Ghana's Health System

a. The Intensity of Decentralisation

The study examined the amendments to the decentralisation process in Ghana in an attempt to determine the changes in the degree/intensity of the decentralisation process since its inception. The analysis revealed that, since 1993 when the decentralisation law was passed a number of actions, amendments and reviews have taken place with the aim of improving the effectiveness of the decentralisation process. These have ultimately resulted in a higher degree of decentralisation. Some of these, for example, the establishment of the local government services, are the outcome of the policy implementation process and may be viewed as part of the operationalisation and implementation of the decentralisation law.

However, a significant number of these amendments were born out of the need increase the level of decentralisation in the country. These amendments include the increase in the level of the District Assemblies Common Fund available to districts, the creation of a fund for Members of Parliament, the establishment of the District Development Facility and the increases in the total number of districts and rezoning of district boundaries. Regardless of the motivations for such amendments, their result has been that the decentralisation process has gradually intensified over the years. The latest review of the decentralisation policy has seen the amalgamation of all the laws on decentralisation into one consolidated local government bill which is currently before parliament.   The new look Local Government Law will comprise the following;

The District Assemblies Common Fund Act 1993, ACT 455

The Local Government Act, 1993, ACT 462,

The National Development Planning System Act, 1994, ACT 480,

The Local Governments Services Act, 2003, ACT 656

The Internal Audit Agency Act, 2003 ACT 658.

b. The level of the Health System Decentralisation

It was essential to know the level of decentralisation in the health sector in order to address the objectives of the study, especially in the context of Ghana where the issue of health sector decentralisation continues to ignite passions. Addressing the question on the status of the decentralisation of the health sector elicited the following three themes from the respondents, namely, the view that the sector was not decentralised as a result of the structure, some form of decentralisation, although partial, exists n the sector and, finally, the view of a minority that believed strongly that the health sector had not been decentralised as a result of both its nature and its structure. However, irrespective of the stance taken by interviewees or policy makers, the one issue that emerged strongly was the fact that the way in which decentralisation was implemented in the health sector required reform. Such reform was especially urgent as regards the manner of cooperation between the health sector and the local government system, the level of local governance and popular participation in the decision-making process of the health sector. As regards this theme it is concluded that the health sector is, in fact, decentralised and that it has in place structures and systems that appear to work effectively. However, the health sector and the communities it serves would benefit significantly from improved cooperation with the devolved local government system and which may require some streamlining of laws and roles.

c. Motivations for Health Sector Decentralisation

The interviews also sought to determine, from the perspective of policy makers, the motive for the health sector decentralisation. The interviewees identified ten motives which were analysed and categorised into the three sub-themes of political, economic and administrative. It is informative to note that enhancing equity in the health system at all levels was considered to be a major objective of the decentralisation policy. The majority of the policy makers interviewed believed it is

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only within a decentralised system that citizens, no matter where they live, could enjoy equitable levels of health care.

8.2.2 An Examination of the Inequities in Health

The study adopted a five-pronged approach to examining the inequities in health in Ghana's decentralised system. This approach included an examination of the patterns in maternal health utilisation, an exploration of inequities in terms of selected health resources at the district level, an examination of inequities in the utilisation of antenatal health utilisation, a decomposition of these inequities into intra and inter regional shares and, finally, a qualitative assessment from the perspective of policy makers of the effect of decentralisation on health inequities in Ghana. The details of these investigations are presented in the sections below.

a. A Qualitative Assessment of Health Inequities

The qualitative analysis of the data from the interviews revealed that policy makers at all levels were emphatic that decentralisation had contributed significantly to reducing health inequities in general and maternal health inequities specifically in relation to this study. The interviewees identified six channels via which they believed decentralisation had worked to mitigate the inequities in the health system. These were; increased funding to subnational health structures, local content and context in design and implementation of health policies, innovative and home grown solution by districts for health challenges, the National health insurance scheme which was initiated at the district level, increased responsiveness in combating health issues and support and collaboration between the district health directorate and the district assemblies. However, they were cautious and referred to the fact that other policies had also been implemented over the period since decentralisation was implemented and that the general improvement in the economic situation in the country had provided a much-needed boost to and basis for the reduction in inequities. The general viewpoint remained that, without the effort of the

decentralised local government, the decentralised health department and the collaboration between the two structures outcomes would have been significantly worse than they, in fact, were.

b. Patterns of/in Maternal Health Utilisation

Although important for the research objectives of the study, the patterns in the use of maternal health care services were was not the main focus of the study. Chapter 6 examined the patterns in the use of two maternal health care variables, namely, antenatal care use and delivery services by location and wealth. The women living in rural areas were noted to have lower levels of utilisation of the two maternal health services examined as compared to their urban counterparts. This was especially obvious in the case of the more specialised services such as doctors' services and hospital delivery services. The regional level analysis revealed an extremely mixed pattern in the three northern regions (Northern, Upper East and Upper West). These regions, which are noted for their high levels of poverty, showed the lowest utilisation levels of all the services explored. The analysis also revealed that the maternal health care services examined in Ghana varied significantly by location, wealth and regions, both in 2003 and in 2008. Although the 2008 level showed a substantial improvement on the 2003 levels, these patterns illustrated the working of the inverse care law in the utilisation of maternal health services in Ghana.

c. District Health Inequities in Ghana

At the district level it was determined that wide inequities existed in the distribution of doctors, nurses and health facilities. Using the concentration indices, at the district level, nurses showed the widest inequities with an index value of 0.32. This was followed by inequities as regards doctors at 0.29. The positive value of the inequities also revealed that these resources exhibited pro-rich inequities.

The concentration index for health facilities also recorded positive values, indicating the presence of pro rich inequities in the distribution of health facilities. This was

further aggravated by the fact that these facilities range between a health post and a health centre to a teaching hospital. At the time of the study there were only 3 tertiary hospitals, 10 regional hospitals and 124 district hospitals throughout the country (Abdullah et al. 2011). It was obvious that the presence of a health facility did not necessarily indicate that availability of all the health services required.

The interviews with the health policy makers and district official corroborated these findings. The policy makers argued that many of the health facilities in the rural and deprived districts were without the much needed health personnel and equipment. The interviews also pointed to the fact that rural areas had been prioritised for CHPS facilities and that, although this was helping to provide some level of the much needed services to the rural population, a consequence of prioritising rural areas for CHPS meant that a majority of health facilities available in rural areas were not either hospital or clinics. Although useful, especially in cases of emergency interventions, the limited scope in terms of the treatment and facilities available at these CHPS facilities may contribute to driving the district health inequities.

d. Regional Inequities in Antenatal Care Utilisation (Measurement and Decomposition)

The inequality curves analysis of the use of antenatal health care services indicated pro-rich inequities in the use of these services as depicted by the concentration curve lying wholly below the line of equality. However, this situation is shown to have improved in 2008 from 2003. This finding was corroborated by the concentration index analysis which provided the actual level of inequities as measured by the concentration indexes for 2003 and 2008. This, in turn, revealed that the general level of inequities in antenatal care use had dropped from their 2003 level of 0.15 to the 2008 level of 0.10.

The results from the decomposition revealed that a decline in inequities in both between group inequities and within group inequities. The analysis showed that, for

both time periods, within group inequities were significantly higher than the within group component. The Theil's index confirmed this result by showing an overall decline in inequities from 0.17 in 2003 to 0.13 in 2008. Thus, once again as with the concentration index, the Theil's index revealed a drop in both the within group component and the between group component. The Theil's index also further confirmed the fact that inequities in antenatal care utilisation were driven primarily by within group inequities with within group levels of 0.16 and 0.14 for 2003 and 2008 respectively and the corresponding between group components of 0.01 and 0.01 respectively.

8.2.3 Persisting Threats to Equity in Ghana's Decentralised Health System

The policy makers interviewed also highlighted that there continue to be threats to equity in Ghana's decentralised system. These threats were classified as political, economic, and ecological factors. Political factors identified include; the very character of the district assemblies, unequal power relations between the ministry of health and the local government ministry and incomplete nature of the decentralisation and the Ad Hoc nature of cooperation between the Health system and the district assemblies. Economic factors covered; levels of poverty in the various districts, level and types of economic activities in the districts, challenges with the District Assemblies Common Fund equalising between the districts and districts' capacity to utilise funds and manage the health sector and monitor the health sector. Ecological factors identified were noted as; differences in natural resource endowment between districts and proximity to the central government. They respondents argued that the progress of the decentralisation process in reducing inequities has been significantly slowed down by the existence and persistence of these threats. Thus, if decentralisation is to fully achieve one of its major objectives, namely, to reduce inequities, it is essential that strategies adopted to eliminate these threats.

8.3   Contribution of the Study

8.3.1   Empirical Contribution

The primary contribution of this study to the existing body of academic literature is the fact the study has provided a comprehensive empirical assessment of the effect of decentralisation on inequities in health, focusing specifically on maternal health care utilisation.   This is especially significant in view of the fact that the effect of decentralisation on health inequities remains unclear in the existing literature and depends significantly on the country specific situation. In achieving this comprehensive empirical assessment, the study has also provided a detailed analysis of regional and district level inequities in maternal health utilisation and selected health resource variables in the Ghanaian context. I am not aware of other empirical studies in the context of developing countries which have provided such a depth of information on this topic.

8.3.2   Methodological Contribution

a. Mixed Methods Approach to the Analysis of Health Utilisation in a Developing Context

In recent times there has been an increased interest in the application of a mixed methods approach to research problems.   This approach provides a means of overcoming a number of challenges in the area of data availability, assessing specific research questions and increasing the level of detail. On the specific issue of decentralisation in the Ghanaian context the lack of comprehensive district level datasets and design challenges has meant that researchers have often stayed away from applying quantitative methods to questions on decentralisation in Ghana. In the event of researchers applying such methods they have done so to very specific cases and topics that rely mostly on institutional data.   In combining methods at various stages this study has provided a comprehensive analysis of decentralisation, presenting not only a national view but also enough detail to enable the

understanding the uniqueness of the situation in the Ghanaian context. Thus, the study provides guidance on the use of a mixed-methods approach to addressing similar gaps in data in the context of other developing countries with similar problems or to other research questions.

b. Applying the Inequality Index Decomposition to a Maternal Health Utilisation Variable

There are techniques available for measuring and decomposing inequalities and these have often been applied within the health context. However, researchers have not been bold in the application of such techniques to the developing country, primarily as a result of the seemingly inadequacy of data, including the lack of specific variables at certain levels (O'Donnell & Wagstaff 2008). These gaps in data have created a fear in researchers that their study results may not be comprehensive enough. However, although new datasets may be created to investigate such situations in the future, the analysis of the past patterns and circumstances is possible only in the context of the creation of new methods and the application of new anthropometric measures which seek either to eliminate or minimise the limitations arising from data unavailability. In the case of Ghana and measuring the effect of decentralisation on horizontal inequities in maternal health utilisation this study sought to achieve this by applying inequality indices. This was achieved by using PCA techniques to determine which variables (out of the available bouquet of health and socioeconomic variables) best explained maternal health utilisation in the absence of some seemingly ideal variables such as a self-rated health variable.

8.3.3 Theoretical Contribution

a. Optimal Redistribution under Decentralisation

The absence of a theoretical consensus on the effect of decentralisation on health inequities means that an effective assessment of the effect of decentralisation on

equity remains primarily an empirical issue. The theory is ambiguous about the level of government which should perform the redistribution function and the theoretical link between decentralisation and disparities and, thus, the way in which it affects equity at the regional level is not conclusive. Oates (1972); Pauly (1973) and Tresch (2002) concur that, in the absence of a strong redistribution policy, decentralisation has the potential to exacerbate inequalities across jurisdictions with various tax bases (Tresch 2002). Accordingly, in order minimise inequalities under decentralisation it is essential that optimal redistribution is handled by the central authorities.

The case of Ghana, as illustrated by the relatively low levels of inter regional inequities, the significantly higher levels of within region inequities and a historical pattern of inequality between the regions, suggests that the focus on redistribution could not be at one level only. In the context of a developing country, in which the mobility of individuals is constrained by a number of factors, this study supports the argument for redistribution at both the national and local levels. However, there is need for empirical evidence to help address these issues in country specific situations. The horizontal inequalities framework provides an explanation of the reason why inter-regional inequalities, even if considered as extremely low, continue to serve as a threat to within group inequalities.

b. Decentralisation and Inequalities

No single theoretical argument provides a comprehensive reason for the persistence of inequalities in the context of decentralisation. Evidence from the analysis and discussions suggests that the persistent inequalities under decentralisation transcend the boundaries of subject matter and existing theories. Factors identified by this thesis includes; political, ecological, economic, and socio-cultural factors. This finding is of particular value if research outcomes are to provide policy recommendations that will outline applicable and practical options to the solution of the problem of inequalities. By using an approach that included the application of a multiplicity of theoretical explanations and also a practical and policy relevant

political economy approach this study has extended the conventional techniques used to address similar research questions.

8.4   Implication for Policy Making

8.4.1   A Way Forward for Health and National Decentralisation

a. State of Health Sector Decentralisation

The debate on health sector decentralisation has been continuing in national circles. However, despite the fact the arguments for and against the decentralisation of the health sector remain heated strong any action designed to bring about has so far been limited. It is, however, clear that the status quo cannot continue for long. The issue of the status of health sector decentralisation and its positioning within the devolved district assembly structure cannot continue to be avoided. Recent discussions in the media (Mordy 2014; Okoampa-Ahoofe 2014) suggests that the Minister of Health has reopened the discussion about the decentralisation of the health sector by asserting that the salaries of medical doctors should be paid by the District Assemblies.

The arguments against a fully devolved structure for the health sector by respondents such as the district capacity to manage the sector, lines of accountability for district assembly heads, abuse of funds, district financial strength, the current evidence of the lack of support for the health directorate and the fear that health sector may not be prioritised,[87] all remain relevant. On the other hand, the arguments in favour of a fully devolved health sectors such as the concerns about dual reporting lines, inability to adequately monitor the health sector at district level, arbitrary nature of the relationship between the sector and the assembly, the lack of accountability to the assemblies and the restrictions on districts as regards the which priority areas on which they choose to focus on by some respondent are also pressing. Nevertheless, it

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[87]Author's Fieldwork 2012

is clear that action must be taken and also that, in the absence of the action, interim measures must be put in place to streamline cooperation and coordination and eliminate all arbitrariness from the relationship between the health sector and the district assembly structure. To quote a participant;

> *National development should not depend on how people feel about each other; it is our job, as officers, to work together to develop the country and provide the citizens with social services but, in the current situation, this is not always clear[88]*

b. Develop a National Metric for Assessing the Economic Viability of Districts

The decentralisation law makes provision for a review of the size and number of districts based on population growth and district size (see Chapter 5). However, a further extremely important requirement, which appears to be often overlooked in the law, is the way in which this is defined and measured. In addition, it is essential that the districts created are economically viable. However, it remains unclear as to which exact metric is/was used to ensure the economic viability of existing districts and new districts. This, in turn, has resulted in a situation in which several districts are economically unviable and depend primarily on transfers from the central government. In the interviews conducted, the Kumbungu District Officers indicated that their district's major source of revenue was from one market, which operated as a large market on one day a week. A participant from the Ministry of Finance also pointed out that, when he had initially been posted to a rural district, the district's only source of revenue had been a huge market that had operated once a week only. This, in turn, meant that the district was almost solely depended on transfers from the central government and, if these funds were delayed, projects and programmes

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[88]Author's fieldwork, 2012

would remain unattended with the staff of the district earning salaries but with little or no work to do.

The analysis of the IGRs of districts presented in Chapter 5 revealed the wide gaps in the revenue generation abilities of district assemblies. The officers from the Ministry of Finance and other national level officers argued that, although they encouraged districts to diversify their revenue sources, the reality was, in many of the poor deprived districts, the lack of resource endowment and the high levels of poverty among the communities meant that there are not such sources available to be diversified. While the size of the district and the population size remains crucial as regards access to and delivery of services, an economically unviable district is not able even to attempt to provide such services. There is, therefore, an urgent need to develop a national metric for the assessment of a district's economic viability before the creation of new districts and, where possible, the number of existing districts should be scaled down. The alternative is to freeze the creation of new districts or provide more stringent conditions for the creation of districts and address with the changing circumstances of districts.
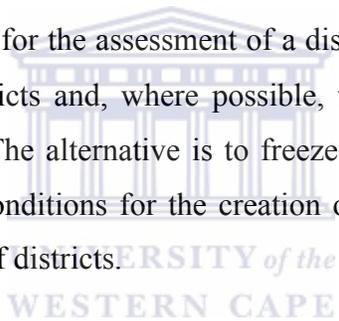
c. Ensuring Accountability as Districts are Empowered

Under Ghana's 1992 constitution and the Local Government Act the district chief executive is appointed by the President of Ghana. This appointment is then either endorsed or rejected by the assembly members. Thus, the district chief is not elected by the voters of the district. However, the practice of appointment by the president has resulted in a lack of accountability on the part of the DCEs. In addition, the president, who appointed them, is also the only person who may dismiss them. Thus, the DCEs consider themselves accountable to the president and not to the elected assembly members. In other words, it is loyalty to the president and not job performance which keeps them in office and, hence, the lack of accountability to the local representatives and the lack of transparency in dealing with the assemblies.

The period of nomination of the assembly head is often characterised by agitation on the part of the youth, local people in general and other identifiable groups as they reject many of the DCEs. However, the appointment of many of the rejected nominees is confirmed through negotiations. As regards promoting development and reducing inequities concerns have been raised about the effect of the lack of accountability on support to the social sectors and even the selection of developmental projects at the local levels. Many of policy makers at the assembly level, the national level and within the health structure, alluded to the fact that assemblies remain largely biased toward the provision of physical infrastructure that is tangible and, thus, serves the executives in their electioneering campaigns as the physical infrastructure is depicted on election campaign advertisements and shown to the electorate as evidence of development.

In the context of a developing country in which there is lack of or limited availability of physical infrastructure, investment in physical infrastructure is not necessarily negative. However, in mitigating inequalities and inequities and sustainably reducing poverty, an excessive focus on physical infrastructure to the detriment of more programmatic developmental needs has the potential to create imbalanced development. The interviewees from the health directorate cited a number of situations in which health facilities had been constructed but without the staff and equipment required to manage and run the facilities effectively. One respondent gave the example of a District Chief Executive who had promised to construct a teaching hospital for a district that, at that time, did not even have adequate staff to manage the existing facilities. With the move toward financially empowering the District Assemblies, there should also be existing channels for accountability to the local population and this will happen only when these district heads are elected directly by the population. Situations such as these will be minimised if DCEs are directly accountable to their citizens while popular expectations will also be trimmed down to more realistic levels.

8.4.2   A National Definition for Equity In Health towards the Elimination Of Inequities in a Decentralised System

The analysis revealed that low levels of health utilisation and inequities in health utilisation remain prevalent in regions with documented high levels of historical socio-economic deprivation. Based on literature examined in the study (Rawls 1999; Sen 2002; Stewart 2008) the solution to the inequities in health in Ghana may lie predominantly in reducing the inequities in other dimensions such as the economic, social and political. However, despite the fact that attempts are being made to correct this prevailing inequities in other dimensions, the fear exists that not paying attention to other regions and areas may lead to those regions underperforming. There are also concerns over fairness in the distribution of nationally resources with arguments that all groups and all Ghanaians to enjoy equal amounts of the nation's resources.

In the context of this study these arguments persist as a result of the lack of a national consensus on the definition of inequities. In order to ensure an understanding as to what constitutes inequities and why and how these inequities will be corrected there needs to be a national direction on the way in which inequities are defined. In applying the Rawlsian notion of justice (Rawls 1999; Rawls 1971) and Sen's approach (Sen 2009) to justice as outlined in Chapter three of this thesis, it is suggested that, in the case of health care utilisation, all individuals and groups in the country should be accorded equal opportunities as regards their utilisation of healthcare according to their needs, irrespective of their socio-economic status. Anything contrary to this ideal translates into a state of injustice and, thus, if historical arrangements and prevailing socio-economic conditions deem this impossible all attempts to rectify the situation must continue.

8.4.3   A Call for A National Data Set for District Level Analysis

At this stage the only nationally representative sample survey at the district level remains the CWIQ, which is extremely dated as the most recent version was conducted in 2003. A possible reason for this is the continued expansion in district

numbers. Although surveys have been conducted in selected districts, allowing for analysis in these particular districts, it remains unclear how decentralisation aims to achieve its goals without a comprehensive national dataset on districts. Such a dataset would allow for the tracking of the socioeconomic performance of districts and even the prevailing poverty situation in districts.

If national development is targeted at the district level, there is a need to be able to record patterns of growth and poverty reduction at both the district and regional levels. However, this is possible only with the creation of a district level dataset that will allow for the tracking of performance in respect of the national developmental goals. The scope of such a project is so vast that only a national statistical service could address it adequately. It is, therefore, imperative that national sample surveys move away from regions as the basis for comparison and focus on the districts as it is only then that the data will provide the level of detail and information required to influence national development patterns and reduce poverty in a sustainable way. Evidence suggests that the patterns at the district level vary significantly from the patterns at the regional levels and that regions are not always a true reflection of all the districts within those regions.

8.5   Research Gaps: Suggested Areas for Future Studies

The study outlines two areas for future studies in order to elaborate on the relationship between decentralisation and health inequities. It is recommended that the first such study area should involve a cross-country comparative analysis which would demonstrate the impact of decentralisation reforms on health inequities at a national level. Such a study may potentially eliminate design issues, and would also provide an explanation on whether different forms of decentralisation (country specific designs) reforms would lead to different patterns of inequities in different countries. It is also important to conduct collaborative regional studies although this would require coordinating national surveys across countries.

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The second area suggested for further studies involves a study on the impact of decentralisation at the local level in the developing countries, for example, Ghana. A study of this nature would require a much larger scope than this study was able to cover and also a more detailed analysis of inequities in Ghana. It is anticipated that such a study would provide baseline data on socioeconomic indicators and performances in all the districts in Ghana. A study of this magnitude would require the creation of a nationally representative survey data set at the level of districts and allow for a reclassification of the spatial patterns of deprivation at a much lower level and in more detail than is currently being achieved at the regional levels. In addition, it would ensure that district level poverty could be accurately measured and tracked for all districts in the country.

8.6   Final Commentary

In 2013, Ghana, as part of the implementation of the 2010 decentralisation policy review, introduced a composite budgeting system in terms of which health sector budgets and all other sector budgets would be submitted as part of the District Assemblies' budgets and not the sectors' budgets (Ministries' budget). Thus, the funds for the district health directorate would, ultimately, lie with the District Assemblies. Many believe this is what is needed to ensure that the health directorates view themselves as part of the District Assembly structures. However, others believe that this will not improve the prevailing situation in the least as, in such a case, the district would be receiving the funds only but control and use of such funds would remain in the hands to the Ghana Health Service through the district health directorates. By the time this study had been completed a number of key reforms in decentralisation had been initiated and it is hoped that they will lead the way in reducing the health inequities that have been demonstrated in this thesis.

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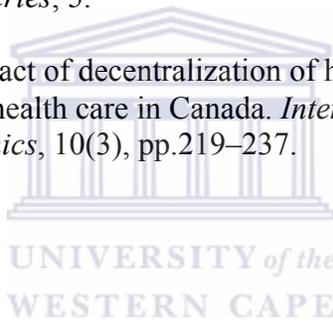
APPENDIX A

Introductory Letter

INSTITUTE FOR SOCIAL DEVELOPMENT

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7ᵗʰ June 2012

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

INTRODUCTORY LETTER

This letter serves to introduce Ms. Coretta Maame Panyin Jonah, a PhD Candidate in International Development Studies of the Institute for Social Development, University of the Western Cape. Ms. Jonah is undertaking her research on the topic "Spatial Dimensions of Health Inequities in a Decentralised Health System: Evidence from Ghana" the nature of the thesis requires interviews with individuals, groups and institutions who have valuable knowledge on the subject matter.

I would therefore be grateful if you would grant Ms. Jonah an interview and access to the relevant information. I can also confirm that Ms. Jonah's proposal has been evaluated and approved by the University's academic board and ethics committee and she has signed the University Research Ethics Declaration, which prescribes acceptable pattern of behavior when conducting interviews and reseach. I would also like to confirm that information received is purely for academic purposes and will be treated as confidential. The University values your support in assisting our student.

Yours Sincerely

Prof. Julian May
Director and Professor

APPENDIX B

Ethics Statement

Ethics Statement

This study will be conducted once the Post Graduate Board of Studies and the Senate Higher Degree Committee of the University of the Western Cape (UWC) has approved the research proposal. The researcher will adhere to following ethical rules:

- Participation in the research study will be voluntary, with no form of coercion used against participants.
- Confidentiality will be guaranteed, and the participants reserve the right to withdraw from the research at any stage and for whatever reason.
- The researcher will take responsibility in ensuring that all the information gathered is treated sensitively and confidentially as well as protecting the identities and interests of all participants.
- The researcher pledges to meet all the other legal and ethical requirements of the University of the Western Cape throughout the course of the study.
- The researcher also undertakes to submit the research findings to all relevant bodies and will also make the research available to the information bank of the University of the Western Cape.

Letter of Consent

I..........................., have had the opportunity to ask any questions related to this study, and received satisfactory answers to my questions, and any additional details I wanted.

I agree to take part in this research.

I understand that my participation in this study is voluntary. I am free not to participate and have the right to withdraw from the study at any time, without having to explain myself.

I am aware that this interview might result in research which may be published, but my name may **be/not** be used. (Circle appropriate).

I understand that if I don't want my name to be used that this will be ensured by the researcher.

I understand that I may also refuse to answer any questions that I don't want to answer or that makes me feel uncomfortable in any way.

Date: _____

Participant Name: _____ Participant Signature: _____

Interviewer Name: _____ Interviewer Signature: _____

If you have any questions concerning this research, feel free to call Sabelo Sibanda at +27788471666 or my supervisor: Prof Keen Knowledge at +2721 959 3855.

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APPENDIX C

Fieldwork Plan

1. Mobilisation and review of reports (2 months)

    a. Annual Progress Reports (APRs) - Ministry of local government, ministry of health, selected districts (NDPC), Ghana Health Service

    b. District assemblies common fund disbursement and use (Ministry of local government)

    c. The Ghana Health Service and Teaching Hospital Act 1996

2. Gathering mobilisation of secondary data – Ghana statistical Service (1.5 month)

    a. Gathering of household surveys data (GLSS, GDHS),

    b. Refining, cleaning, merging data set and creating new variables

3. Gathering of Primary data - Conducting of interviews and meetings with institutions/stakeholders (2.5 months)

    a. Pretesting of interview guide
    b. Identification of interviewees
    c. Correction and editing of interview guide
    d. Conduct fieldwork
    e. Transcribe interviews

APPENDIX D

Interview Schedule

DECENTRALISATION AND INEQUITY DISTRICT ASSEMBLIES

District Name:

Officer Interviewed:

Date of interview

Location of interview

Section One : General Question on Decentralisation and inequity

1. Do you have any comments on the decentralised programme?
2. What are your views on health sector decentralised?
3. Is the health sector decentralised?
4. What do you know as the motives for decentralisation in general and with specific focus on the health sector?
5. If respondent mentions equity above skip if not: Was equity a major goal of decentralisation
6. How is equity understood in health sector
7. Do you think decentralisation has affected equity in the health sector?
8. What are the ways in which decentralisation affected equity in the sector (Assessment of impact and outline possible channels)
9. Do you see any challenges decentralisation posses to equity in the health sector

Section Two: Planning and Service Delivery

1. Has your district set any health priorities?
2. Any district level initiated health project/programmes?
3. Is your district performing/supporting any specific health delivery functions?
4. With specific focus on maternal health what roles are districts/ your district

preforming i. prenatal care/ postnatal/ delivery?

5. How are these services funded?

Section Three - Health Workforce/human resource

1. Has your assembly been involved in training of health workers?

2. Has your assembly been involved in the recruitment of health workers?

3. Has your district provided any motivation packages to health sector workers?

Section Four - Health Information and communication technologies

1. Does the assembly provide any support in the area of ICT (internet, computers, data processing) to the health directorate?

2. Has the assembly assisted in the acquisition of any new technologies (health equipment's also counts) for use in health?

3. Does the assembly conduct any analysis of data health data for internal consumption or dissemination?
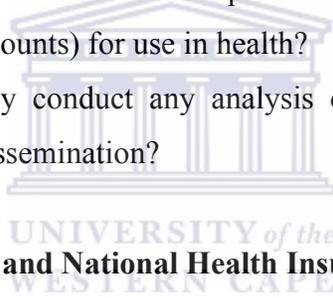
Section Five - Financing and National Health Insurance Questions

1. What are the sources of funding available to your district?

2. Are these funds adequate for districts needs?

3. What are your impressions of the following funding mechanism?

i.   DACF

ii.   DDF

iii.   IGR

4. Has the decentralisation process resulted in varying level of financing for health between districts?

5. Are there major differences in spending patterns between districts, especially within the health sectors?

6. Does your district spend significant amounts of DACF on health and health related activities activities?

7. Does your district spend significant amounts of IGF on health and health related

activities?

8. Does districts/your district make extra effort to secure additional funding for health sector financing?

9. Does your district support citizens to join in NHIS?

Section Six cooperation between devolved districts and deconcentrated health sector

1. Do you work with the assembly (or health directorate) in your district?

2. What kind of dialogue do you have with the district assembly (or health directorate) within your district?

3. Does the district monitor level of health services provided by the facilities within the district?

Section Seven: Prognosis Questions

1. Have there been numerous questions from stakeholders asking for further clarification of the decentralisation policy with respect to health?

2. What about amendments? Have stakeholders been requesting further amendments to the health sector decentralisation policy?

3. Do you feel it would be feasible or desirable to address or clarify the decentralisation policy with regards to health at this time?

4. What do you think is the way forward for health sector decentralisation in Ghana?

APPENDIX E

Regional Tables: Maternal Health Utilisation

Table Ap1: Region and use of doctor's services for prenatal

Regions	2003			2008		
	Doctor	Other	None	Doctor	Other	None
Western	6.16	9.11	5.21	5.33	9.39	12.20
Central	7.58	6.17	3.79	3.55	8.07	7.32
Greater Accra	26.54	8.59	3.32	17.16	9.91	6.10
Volta	6.64	7.21	9.00	4.14	8.13	18.29
Eastern	8.53	8.24	4.74	16.57	8.36	7.32
Ashanti	28.91	14.63	7.58	30.77	14.81	7.32
Brong Ahafo	6.64	13.34	2.84	2.96	11.12	7.32
Northern	3.79	14.85	35.55	6.51	12.22	18.29
Upper West	3.79	10.06	10.43	2.96	8.36	8.54
Upper East	1.42	7.81	17.54	10.06	9.63	7.32
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table Ap2: Place of delivery by region

Region/ Delivery Place	2003			2008		
	Home	Health Facility	Other	Home	Health Facility	Other
Western	145	91	1	90	97	2
Central	103	64	1	69	88	1
Greater Accra	50	213	0	31	177	2
Volta	105	95	1	80	101	0
Eastern	121	103	2	68	116	3
Ashanti	161	259	1	85	233	0
Brong Ahafo	154	181	1	77	130	0
Northern	363	62	1	213	92	1
Upper West	175	88	1	98	80	2
Upper East	176	46	0	108	101	1
Total	1,555	1,202	9	919	1215	12

APPENDIX F

Histograms Illustrating Over Dispersion In Antenatal Care

b. Checking for over dispersion

Figure Ap1: Histogram for Antenatal Care variable 2003
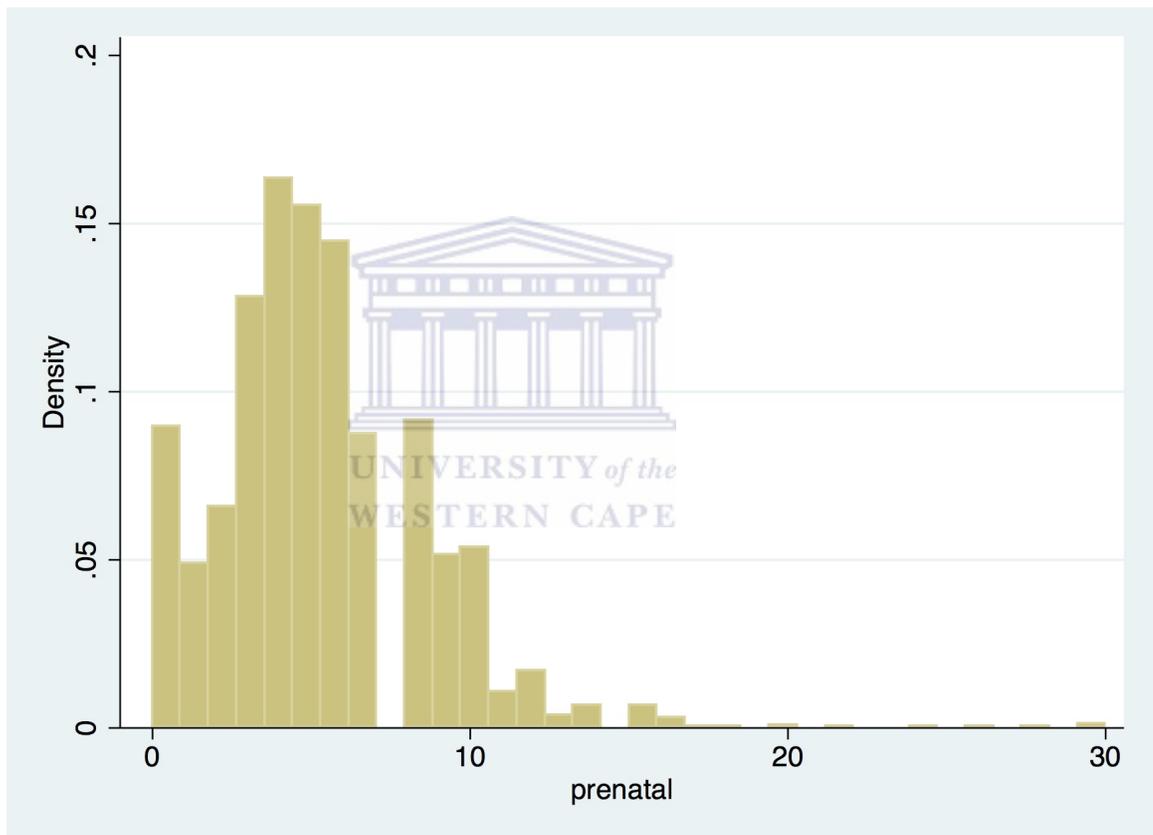
Figure Ap2: Histogram for antenatal care variable 2008
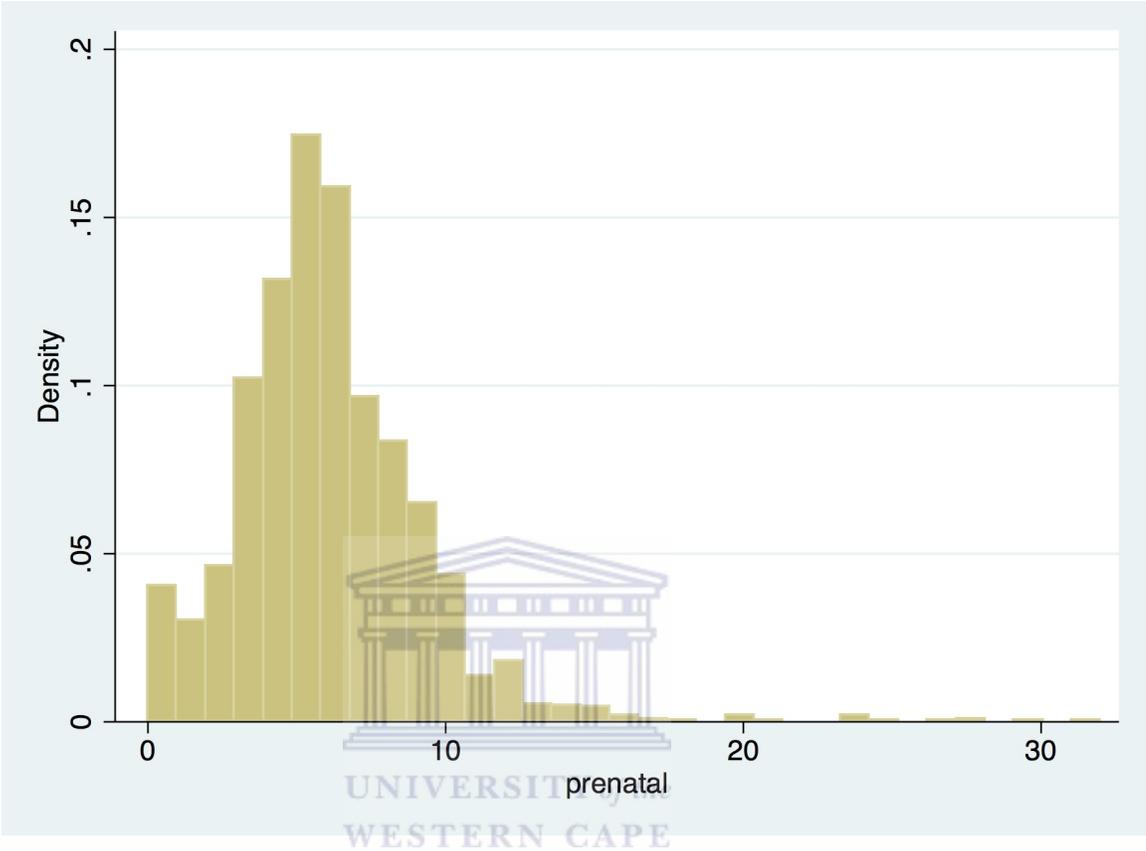
APPENDIX G

Correlation Matrix Of Variables

Table Ap3: Correlations between variables and others 2003

	prenatal	religion	wealth~e	total_~d	BMI	age	marita~s	working	Location
prenatal	1.0000								
religion	0.0274	1.0000							
wealth_ind~e	0.4166	0.0146	1.0000						
total_child	−0.1294	0.0042	−0.2144	1.0000					
BMI	0.0633	0.0111	0.1313	0.0010	1.0000				
age	0.0172	0.0241	−0.0221	0.7879	0.0297	1.0000			
marital_st~s	0.0165	−0.0077	−0.0204	0.1381	0.0483	0.1737	1.0000		
working	−0.0353	0.0018	−0.1314	0.2111	−0.0427	0.2441	0.1045	1.0000	
Location	0.3547	0.0087	0.6852	−0.1691	0.1206	−0.0298	−0.0356	−0.1237	1.0000

Table Ap4: correlations between variables and others 2008

	prenatal	religion	wealth~e	total_~d	BMI	age	marita~s	working	Location
prenatal	1.0000								
religion	−0.1505	1.0000							
wealth_ind~e	0.3666	−0.2841	1.0000						
total_child	−0.1358	0.1772	−0.2785	1.0000					
BMI	0.1213	−0.0323	0.1821	−0.0031	1.0000				
age	0.0490	0.0873	−0.0293	0.7435	0.0743	1.0000			
marital_st~s	0.0152	−0.0206	0.0176	0.1681	0.0368	0.2337	1.0000		
working	−0.0315	−0.0136	−0.0633	0.1573	0.0075	0.1609	0.0821	1.0000	
Location	0.2908	−0.1196	0.6546	−0.1817	0.1445	0.0093	−0.0145	−0.0832	1.0000

Principal Component Analysis (PCA) Output

Table Ap5: PCA- 2008 PCA Output

```
Principal components/correlation              Number of obs    =      4909
                                              Number of comp.  =         9
                                              Trace            =         9
    Rotation: (unrotated = principal)         Rho              =    1.0000
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	2.68625	.978043	0.2985	0.2985
Comp2	1.70821	.713378	0.1898	0.4883
Comp3	.99483	.0538793	0.1105	0.5988
Comp4	.940951	.0238835	0.1046	0.7034
Comp5	.917067	.240809	0.1019	0.8053
Comp6	.676258	.0887482	0.0751	0.8804
Comp7	.58751	.297937	0.0653	0.9457
Comp8	.289573	.0902212	0.0322	0.9778
Comp9	.199352	.	0.0222	1.0000

Principal components (eigenvectors)

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	Comp8	Comp9
total_child	0.4766	0.3018	0.0080	−0.1414	0.0806	−0.3918	0.1042	0.1219	0.6899
BMI	−0.0290	0.2049	0.7948	0.2242	−0.5192	−0.0214	−0.0672	0.0119	0.0237
age	0.3829	0.4841	0.0405	−0.2115	0.0930	−0.2405	0.1874	−0.0804	−0.6816
Visited_he~y	0.0288	0.2679	−0.4980	0.7330	−0.3385	−0.1598	0.0168	0.0166	−0.0378
Wealth_quint	−0.4040	0.4468	0.0269	0.0109	0.2449	−0.0044	−0.0613	−0.7316	0.1930
worked_in1~s	0.3109	0.3504	−0.1157	−0.0809	−0.1179	0.8558	−0.0203	0.0244	0.1152
religion	0.2512	−0.1884	0.3022	0.5448	0.5456	0.1661	0.4244	−0.0886	−0.0008
Attended_sch	−0.4263	0.1536	−0.0558	−0.1665	−0.1729	0.0477	0.8233	0.2182	0.0782
Location	−0.3462	0.4234	0.1006	0.1286	0.4463	0.0186	−0.2950	0.6220	−0.0278

Table Ap6: 2003 PCA Output

```
Principal components/correlation          Number of obs    =      5688
                                          Number of comp.  =         9
                                          Trace            =         9
       Rotation: (unrotated = principal)  Rho              =    1.0000
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	2.6309	.996683	0.2923	0.2923
Comp2	1.63422	.621255	0.1816	0.4739
Comp3	1.01297	.0217834	0.1126	0.5865
Comp4	.991183	.0704164	0.1101	0.6966
Comp5	.920766	.227519	0.1023	0.7989
Comp6	.693248	.0323379	0.0770	0.8759
Comp7	.66091	.400741	0.0734	0.9494
Comp8	.260169	.064536	0.0289	0.9783
Comp9	.195633	.	0.0217	1.0000

Principal components (eigenvectors)

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	Comp8	Comp9
total_child	0.4814	0.3104	−0.0839	0.0196	−0.1603	−0.2952	0.2599	0.1734	0.6738
BMI	−0.0497	0.1802	−0.1729	0.8559	0.4404	0.0788	0.0378	0.0189	0.0259
age	0.4079	0.4776	−0.1000	0.0309	−0.1948	−0.1469	0.2195	−0.1502	−0.6814
Visited_he~y	0.0620	0.2734	0.4290	−0.3532	0.7665	−0.1312	0.0825	0.0259	−0.0202
Wealth_quint	−0.4189	0.4699	−0.0707	−0.0653	−0.0956	−0.0959	−0.1369	−0.7051	0.2454
worked_in1~s	0.3431	0.3059	0.0200	−0.0907	−0.0110	0.7683	−0.4210	0.0232	0.1095
religion	−0.0137	0.0558	0.8682	0.3458	−0.3447	−0.0350	−0.0569	−0.0081	0.0088
Attended_sch	−0.3886	0.2155	0.0376	−0.0838	−0.1100	0.4627	0.7259	0.2001	0.0305
Location	−0.3889	0.4522	−0.0925	−0.0472	−0.1215	−0.2305	−0.3871	0.6391	−0.0856

Table Ap7: Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	KMO 2003	KMO 2008
Total_child	0.6216	0.6299
BMI	0.7182	0.7484
Age	0.5660	0.5674
Visited health Facility	0.7193	0.6598
Wealth_quintile	0.5974	0.6170
Worked_in_12months	0.8084	0.7983
religion	0.5127	0.7635
Attended_sch	0.8010	0.7960
Location	0.6257	0.6202
Overall	0.6376	0.6505

Negative Binomial Regression Results And Diagnostics Tests

Table Ap8: 2008 regression results

```
Negative binomial regression              Number of obs    =      2084
Dispersion         = mean                 Wald chi2(9)     =    436.36
Log pseudolikelihood = -4.986e+09         Prob > chi2      =    0.0000
```

prenatal	IRR	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
total_child	.9541176	.0091241	-4.91	0.000	.9364011	.9721692
BMI	1.000026	.0000112	2.38	0.018	1.000005	1.000048
age	1.016648	.0029121	5.76	0.000	1.010957	1.022372
Visited_health_facility	1.120684	.0303046	4.21	0.000	1.062835	1.181682
Wealth_quint	1.087983	.0125456	7.31	0.000	1.06367	1.112852
worked_in12months	.960598	.0410487	-0.94	0.347	.8834211	1.044517
religion	.9543358	.0163613	-2.73	0.006	.922801	.9869483
Attended_sch	1.060053	.031272	1.98	0.048	1.0005	1.123152
Location	1.100645	.0359713	2.93	0.003	1.032354	1.173455
_cons	2.919149	.2226794	14.04	0.000	2.513765	3.389908
/lnalpha	-2.673121	.1900095			-3.045533	-2.30071
alpha	.0690364	.0131176			.0475709	.1001877

Measures of Fit for **nbreg** of **prenatal**

Log-Lik Intercept Only:	**-5.208e+09**	Log-Lik Full Model:	**-4.986e+09**
D(2073):	**9.972e+09**	LR(9):	**4.439e+08**
		Prob > LR:	**0.000**
McFadden's R2:	**0.043**	McFadden's Adj R2:	**0.043**
Maximum Likelihood R2:	**1.000**	Cragg & Uhler's R2:	**1.000**
AIC:	**4785020.026**	AIC*n:	**9.972e+09**
BIC:	**9.972e+09**	BIC':	**-4.439e+08**

Collinearity Diagnostics

Variable	VIF	SQRT VIF	Tolerance	R- Squared
total_child	**2.70**	**1.64**	**0.3701**	**0.6299**
BMI	**1.04**	**1.02**	**0.9631**	**0.0369**
age	**2.44**	**1.56**	**0.4103**	**0.5897**
Visited_health_facility	**1.02**	**1.01**	**0.9768**	**0.0232**
Wealth_quint	**2.26**	**1.50**	**0.4415**	**0.5585**
worked_in12months	**1.04**	**1.02**	**0.9626**	**0.0374**
religion	**1.15**	**1.07**	**0.8725**	**0.1275**
Attended_sch	**1.42**	**1.19**	**0.7028**	**0.2972**
Location	**1.81**	**1.35**	**0.5516**	**0.4484**
Mean VIF	**1.65**			

	Eigenval	Index
1	**7.6652**	**1.0000**
2	**0.8922**	**2.9312**
3	**0.4486**	**4.1338**
4	**0.3512**	**4.6721**
5	**0.2251**	**5.8354**
6	**0.1655**	**6.8055**
7	**0.1163**	**8.1173**
8	**0.0873**	**9.3717**
9	**0.0350**	**14.8023**
10	**0.0137**	**23.6234**
Condition Number		**23.6234**

Table AP 9: 2003 Regression Results

```
Negative binomial regression                    Number of obs   =      2661
Dispersion           = mean                     Wald chi2(9)    =    664.93
Log pseudolikelihood = -6.237e+09               Prob > chi2     =    0.0000
```

prenatal	IRR	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
total_child	.9509213	.0081808	-5.85	0.000	.9350217	.9670912
BMI	1.000006	9.09e-06	0.68	0.499	.9999883	1.000024
age	1.017499	.0026947	6.55	0.000	1.012231	1.022794
Visited_health_facility	1.118338	.0273982	4.57	0.000	1.065907	1.173348
Wealth_quint	1.09571	.0133342	7.51	0.000	1.069884	1.122158
worked_in12months	1.072001	.038957	1.91	0.056	.9983029	1.151141
religion	1.014724	.0484276	0.31	0.759	.9241112	1.114221
Attended_sch	1.179104	.0296471	6.55	0.000	1.122405	1.238667
Location	1.202731	.0384978	5.77	0.000	1.129595	1.280602
_cons	2.122959	.1754284	9.11	0.000	1.805525	2.496202
/lnalpha	-2.201323	.1301084			-2.456331	-1.946316
alpha	.1106566	.0143974			.085749	.1427992

Measures of Fit for **nbreg** of **prenatal**

```
Log-Lik Intercept Only:   -6.553e+09    Log-Lik Full Model:    -6.237e+09
D(2650):                   1.247e+10    LR(9):                  6.336e+08
                                        Prob > LR:                 0.000
McFadden's R2:                 0.048    McFadden's Adj R2:         0.048
Maximum Likelihood R2:         1.000    Cragg & Uhler's R2:        1.000
AIC:                    4687427.952     AIC*n:                  1.247e+10
BIC:                       1.247e+10    BIC':                  -6.336e+08
```

```
Collinearity Diagnostics

                         SQRT                R-
      Variable     VIF    VIF    Tolerance  Squared
------------------------------------------------------
   total_child    2.90   1.70    0.3446     0.6554
           BMI    1.02   1.01    0.9809     0.0191
           age    2.82   1.68    0.3550     0.6450
Visited_health_facility  1.02   1.01    0.9830     0.0170
  Wealth_quint    2.28   1.51    0.4381     0.5619
worked_in12months        1.07   1.03    0.9342     0.0658
      religion    1.00   1.00    0.9960     0.0040
  Attended_sch    1.29   1.14    0.7757     0.2243
      Location    1.99   1.41    0.5024     0.4976
------------------------------------------------------
   Mean VIF       1.71


                       Cond
        Eigenval      Index
---------------------------------
    1    7.4609       1.0000
    2    0.9262       2.8381
    3    0.4631       4.0138
    4    0.4326       4.1527
    5    0.2841       5.1249
    6    0.1832       6.3815
    7    0.1086       8.2896
    8    0.0927       8.9714
    9    0.0360      14.4047
   10    0.0126      24.3717
---------------------------------
 Condition Number   24.3717
```

APPENDIX J

Memo

MOH, PPME

Memo
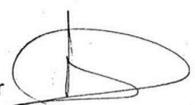
From: Chief Director

To: All Directors and Deputy Directors

Date: July 16, 2013

Re: CONSULTATIVE MEETING ON DECENTRALISATION

As part of the process of decentralizing the health sector, a team from the Inter-Ministerial Task Force on decentralization would like to have a consultative meeting with Directors and Deputy Directors of the Ministry of Health on the propose decentralization of the health sector.

You are accordingly invited to a meeting on the date and time specified below to interact with the team.

Date: Wednesday, 17th July, 2013
Venue: Conference Room
Time: 10:00a.m

Thank You.

APPENDIX K

Utilisation Of DDF In Study Districts

Tamale		
FOAT YEAR	Sector	Budget
2008	Education	591230
2008	Health	114745
2008	Total sanitation	69808
2008	Energy	32700
	Subtotal 2008	808483
2010	Economic	172941
2010	Education	4064257
2010	Health	90027
2010	Water and sanitation	850590
2010	Energy	80579
2010	Subtotal 2010	5258394
GA SOUTH		
2009	Education	611138
2009	Health	260767
2009	Subtotal 2009	871905
2010	Economic	72000
2010	Education	92151

2010	Health	59050
2010	Water and sanitation	27950
2010	Roads	182867
	Subtotal 2010	434018
ACCRA METROPOLITAN ASSEMBLY		
2009	Economic	500000
2009	Education	492282
2009	Health	32000
2009	Energy	258000
	Subtotal	1282282
KUMBUNGU		
2010	Economic	52800
2010	Education	356800
2010	Health	83625
	Total	493225